

# CSCI 572 HW4: Indexing the Web Using Solr

## News Sites to Index: FOX\_News

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### 1. Steps to complete this assignment

#### Step1: Install Solr and run Solr in Standalone mode (Mac)

1. Since I use Mac, I installed Solr directly.
2. Download solr-7.3.0.zip, unzip it and I put this folder in /Users/zejunliu/Desktop.

#### Step2: Indexing the web pages with TIKA

1. Start the Solr server by using the command **bin/solr start** in the solr-7.3.0 folder.
2. Create a myexample new core by using the command **bin/solr create -c myexample**.
3. Cd into the server/**solr/myexample**, the following files appear  
Zejuns-MacBook-Pro:myexample zejunliu\$ ls  
conf core.properties data
4. Cd conf to change the “\_text\_”field in “managed-schema” to combine all the information from different fields into a single field.
5. Put the html files in the folder ”crawl\_data”, and I put it in the folder solr-7.3.0, the core to which I am indexing is “myexample” and I am going to index only html files by running **bin/post -c myexample -filetypes html crawl\_data/** the following appears:

```
solr-7.3.0 — bash — 124x35
POSTing file 03545680f6311ce97205300334a40c11.html (text/html) to [base]/extract
POSTing file d47612923960d7e7889a1935cb587d1.html (text/html) to [base]/extract
POSTing file b1a4f8b8388f78be0550b3bc3ff87520.html (text/html) to [base]/extract
POSTing file 530d17f5e2efc107ca70dfe417e2437.html (text/html) to [base]/extract
POSTing file e7d4e6d275d21b7c93b2c9cafe2290e.html (text/html) to [base]/extract
POSTing file 0772e328bb2683a4ce2849493d08e0.html (text/html) to [base]/extract
POSTing file f602d5614e8fa5c54cbc768ba64283fa.html (text/html) to [base]/extract
POSTing file 336ed11ced262322e0efff17fd42d27f59.html (text/html) to [base]/extract
POSTing file 69d51b9a8a994b8977c0feb74d9dfe.html (text/html) to [base]/extract
POSTing file c6adc048648e1f8038961d0a82d51db.html (text/html) to [base]/extract
POSTing file 2a3ef8a0fb6c7caeae498dc0de18a14f8.html (text/html) to [base]/extract
POSTing file 790124a6b9b9ac1e8ce2985a2f5a58b.html (text/html) to [base]/extract
POSTing file f82cbf0a53f8ef72972e0edb8a20fd281.html (text/html) to [base]/extract
POSTing file fc9e6eb76d438597949d43957cbfa19.html (text/html) to [base]/extract
POSTing file d7cb114fc4a79d798d1267149d29ea4c.html (text/html) to [base]/extract
POSTing file 877581f9220fb8b15c182c8dd4d5877c.html (text/html) to [base]/extract
POSTing file cf5f131ea853cc29a2943fce822ef8d0.html (text/html) to [base]/extract
POSTing file 54@b3fde57d1ea2baacb2b433b12cee57.html (text/html) to [base]/extract
POSTing file e551bf5edd783b4ada62f953c5088df.html (text/html) to [base]/extract
POSTing file edc2bbd3373785a0695ee41a8b82385.html (text/html) to [base]/extract
POSTing file 7984e82691d881e345889f5e1e18a5cd.html (text/html) to [base]/extract
POSTing file 3645c0feb759a9a6e76873a3e42b973.html (text/html) to [base]/extract
POSTing file 56ccb8f0c324638286a71d184821f0f.html (text/html) to [base]/extract
POSTing file 8f5739e0a8f0b0114bcffee498dc0303037.html (text/html) to [base]/extract
POSTing file f30677f5d13f571ae9e78321ba3fa18a.html (text/html) to [base]/extract
POSTing file 083484c949914396f3deea3bca7ddf72.html (text/html) to [base]/extract
POSTing file 15db86de40fcbd87eb529372d23c9ff9b.html (text/html) to [base]/extract
POSTing file 3d816b7a412202d12ea10250de4a7c4f.html (text/html) to [base]/extract
POSTing file a2708ffad0de216ed5bc3843f00fd897.html (text/html) to [base]/extract
POSTing file 3f73a1c8a4dfb4a3b3a0b5be43fc6c45.html (text/html) to [base]/extract
POSTing file df5b3b8ebe00574f4e8172ffccf717c2.html (text/html) to [base]/extract
18562 files indexed.
COMMITTING Solr index changes to http://localhost:8983/solr/myexample/update...
Time spent: 0:02:25.412
```

6. Open the browser and go to <http://localhost:8983/solr/>. Select the core “myexample” from the dropdown. I should see an output showing the statistics similar to the figure below.

Select the query option, and just submit the default query (\*:\*), the following appears.

```

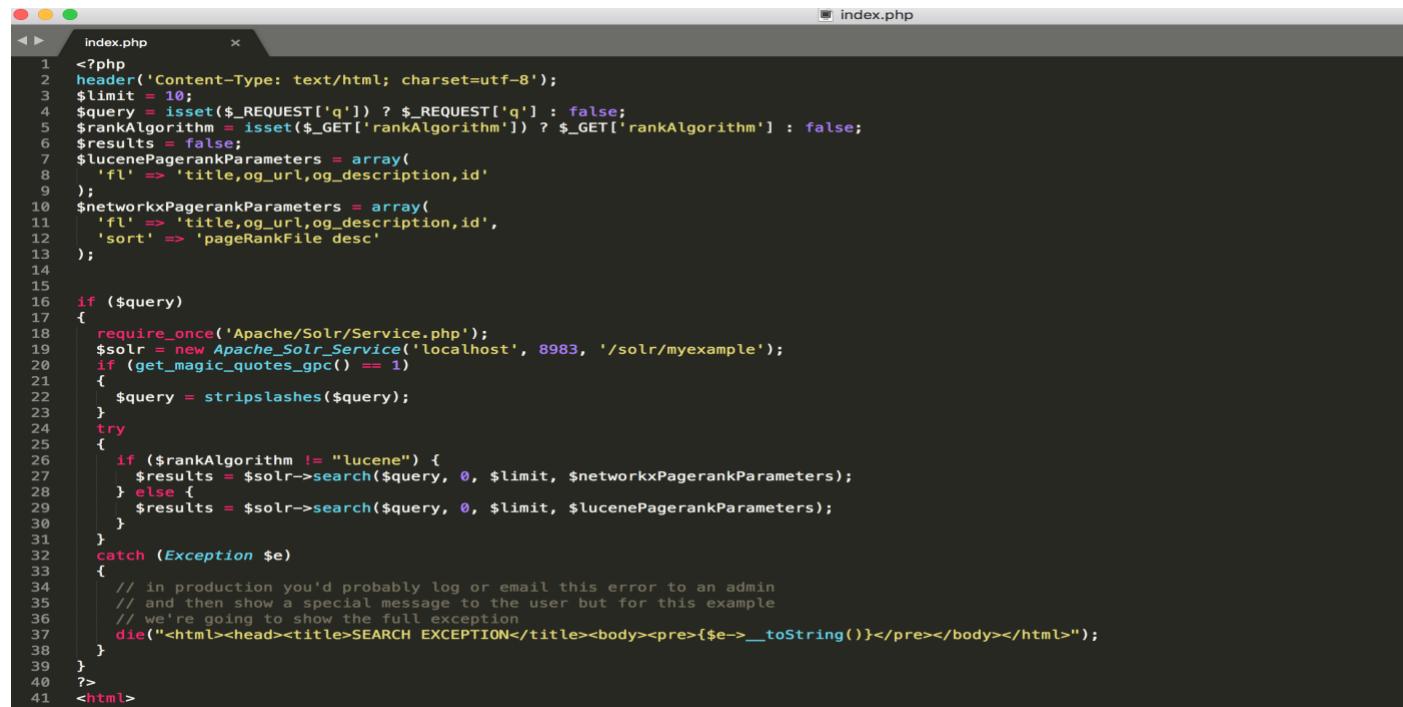
{
  "responseHeader": {
    "status": 0,
    "QTime": 0,
    "params": {
      "q": "*:*",
      "_": "1523325446528"
    }
  },
  "response": {
    "numFound": 18562,
    "start": 0,
    "docs": [
      {
        "id": "/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/69c1824746f1c6bb299f404b0b34be87.html",
        "dc_publisher": ["Fox News"],
        "pagetype": ["article"],
        "og_image": ["//a57.foxnews.com/images.foxnews.com/content/fox-news/science/2016/09/16/like-blue-jeans-this-ancient-fa..."],
        "twitter_card": "summary_large_image",
        "stream_content_type": ["text/html"],
        "og_site_name": "Fox News",
        "twitter_url": "http://www.foxnews.com/science/2016/09/16/like-blue-jeans-this-ancient-fabric-was-dyed-with-indigo.ht...",
        "prism_channel": ["fnc"],
        "og_description": "An ancient textile fragment discovered in Peru represents the oldest piece of indigo-dyed fabric i...",
        "twitter_creator": "@foxnews",
        "dcterms_modified": "2016-09-15 04:15:18 EDT",
        "dc_title": "Like blue jeans, this ancient fabric was dyed with indigo | Fox News",
        "Like blue jeans, this ancient fabric was dyed with indigo",
        "content_encoding": "UTF-8",
        "robots": ["noarchive, nooop, nofollow "],
        "content_language": "en",
        "classification_ia": "digginghistory.plants,history,culture",
        "resourceName": "/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/69c1824746f1c6bb299f404b0b34be87.html",
        "dc_date": "2016-09-16T00:00:00Z",
        "classification": "FOX NEWS/COLUMNS/Digging History,/FOX NEWS/SCIENCE/PLANET EARTH/Plants,/FOX NEWS/SCIENCE/ARCHAEOLOGI...",
        "x_dm_prefetch_control": "on",
        "dc_language": "en-US",
        "dc_format": "text/html",
        "description": "An ancient textile fragment discovered in Peru represents the oldest piece of indigo-dyed fabric in e... "
      }
    ]
  }
}

```

### Step3: Set up apache Server, php environment, and solr-php-client

Since Mac has already installed Apache server and php tools, I do the following:

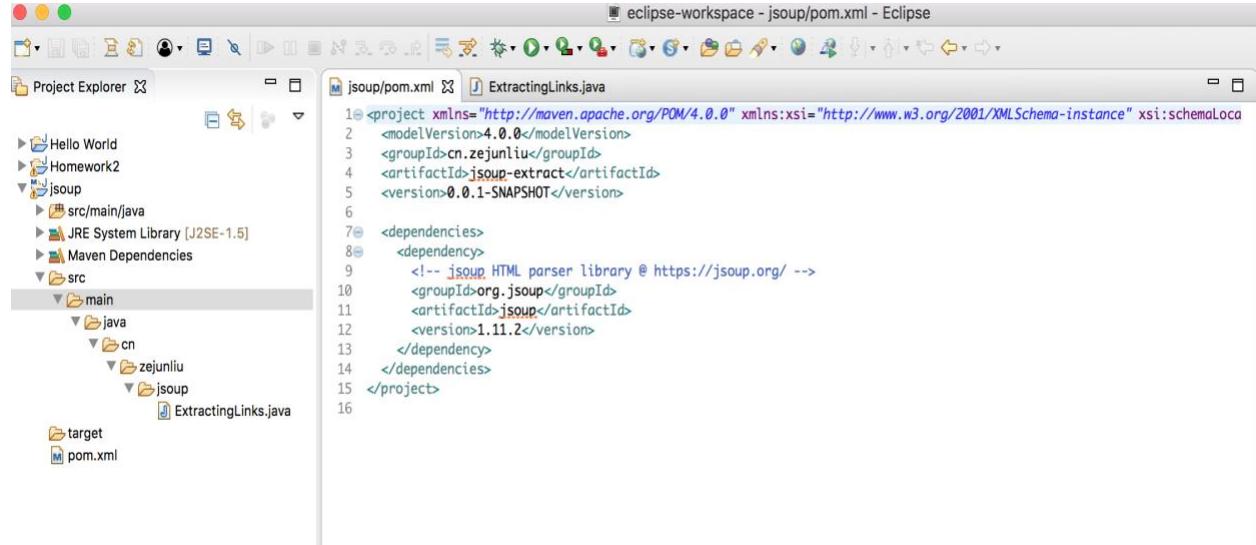
1. Start Apache server by using **sudo apachectl start**
2. In order to control more convenient, I change the root directory to **/Users/zejunliu/apacheServerRoot** from the default root directory **/Library/WebServer/Documents** by change edit file http.conf, which is located at **/etc/apache2/httpd.conf**
3. Now “It Works!” appears in the browser when I input **http://localhost**
4. Start service of PHP environment. Edit the httpd.conf file, find the line **LoadModule php5\_module libexec/apache2/libphp5.so**, delete the “#”. Then restart the Apache server by command: **sudo apachectl restart**
5. Download solr-php-client, and unzip it, then put the folder **Apache** in **Users/zejunliu/Sites**.
6. Then I implement php code, and I put this code in the folder **Users/zejunliu/sites**.



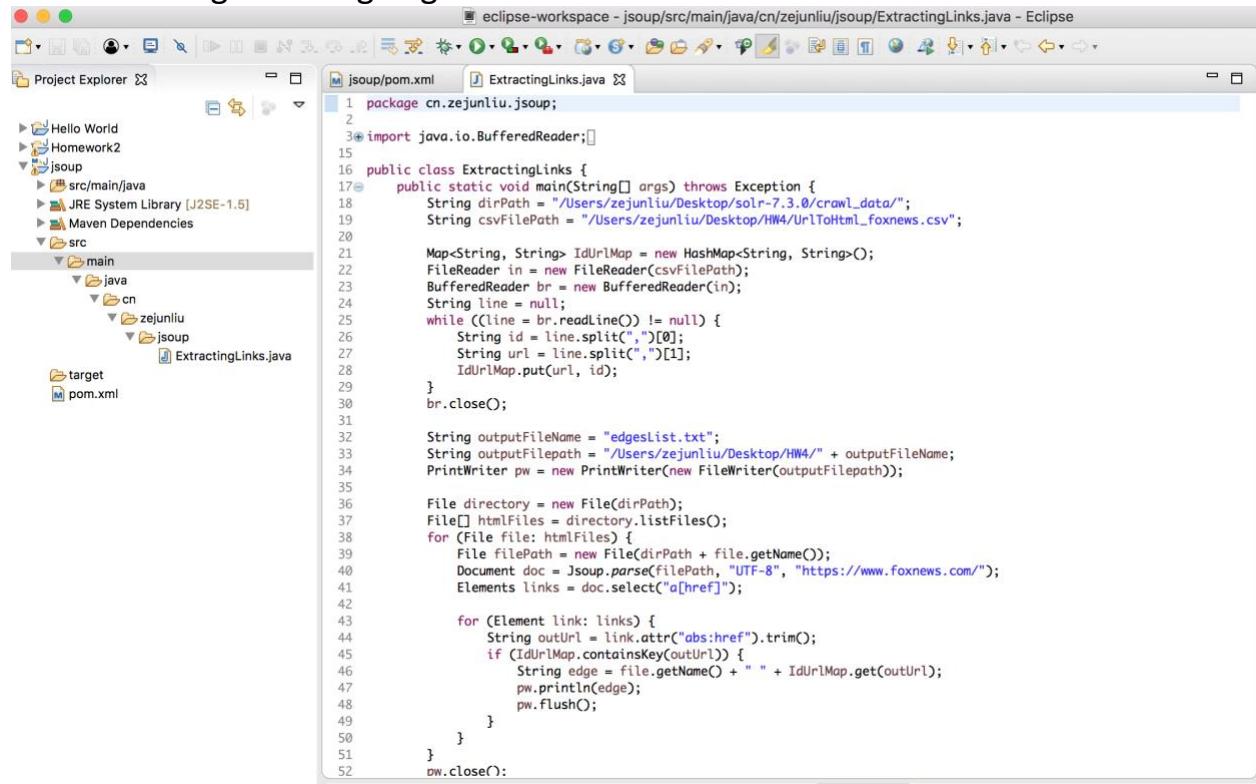
```
index.php
1 <?php
2 header('Content-Type: text/html; charset=utf-8');
3 $limit = 10;
4 $query = isset($_REQUEST['q']) ? $_REQUEST['q'] : false;
5 $rankAlgorithm = isset($_GET['rankAlgorithm']) ? $_GET['rankAlgorithm'] : false;
6 $results = false;
7 $lucenePagerankParameters = array(
8     'fl' => 'title,og_url,og_description,id'
9 );
10 $networkxPagerankParameters = array(
11     'fl' => 'title,og_url,og_description,id',
12     'sort' => 'pageRankFile desc'
13 );
14
15
16 if ($query)
17 {
18     require_once('Apache/Solr/Service.php');
19     $solr = new Apache_Solr_Service('localhost', 8983, '/solr/myexample');
20     if (get_magic_quotes_gpc() == 1)
21     {
22         $query = stripslashes($query);
23     }
24     try
25     {
26         if ($rankAlgorithm != "lucene") {
27             $results = $solr->search($query, 0, $limit, $networkxPagerankParameters);
28         } else {
29             $results = $solr->search($query, 0, $limit, $lucenePagerankParameters);
30         }
31     }
32     catch (Exception $e)
33     {
34         // in production you'd probably log or email this error to an admin
35         // and then show a special message to the user but for this example
36         // we're going to show the full exception
37         die("<html><head><title>SEARCH EXCEPTION</title><body><pre>{$e->__toString()}</pre></body></html>");
38     }
39 }
40 ?>
41 <html>
```

## Step4: Use Jsoup to extract the links from web pages and generate edgeList.txt file.

Then I built a maven project in eclipse.



The code for generating edgesList.txt file:



Part of edges result in edgesList.txt:

```
edgesList.txt
```

```
1 | 69c1824746f1c6bb299f404b0b34be87.html 8f8cbe94a804d7bee5df5b6cb0701702.html
2 | 69c1824746f1c6bb299f404b0b34be87.html 8da923084554b2821233d6c5c5f02c97.html
3 | 69c1824746f1c6bb299f404b0b34be87.html ba174283cce569f904a7a84ec5413fd1.html
4 | 69c1824746f1c6bb299f404b0b34be87.html 5d415a9250115d697d6d8fa61c9c92c8.html
5 | 69c1824746f1c6bb299f404b0b34be87.html f7246d5affdc5267c8e07222130d9007.html
6 | 69c1824746f1c6bb299f404b0b34be87.html 74203677b3a93832f91003adc6ad131c.html
7 | 69c1824746f1c6bb299f404b0b34be87.html 40426b57ce4acf76b2fb4562f389b42.html
8 | 69c1824746f1c6bb299f404b0b34be87.html 8f8cbe94a804d7bee5df5b6cb0701702.html
9 | 69c1824746f1c6bb299f404b0b34be87.html fcd49c4ce1cf87d3e3f69f08c93ab77b.html
10 | 69c1824746f1c6bb299f404b0b34be87.html 3db238663823a3335bc8c66509ff99ca.html
11 | 69c1824746f1c6bb299f404b0b34be87.html d0ba9c4c1010d13413f1c4beee913e99.html
12 | 69c1824746f1c6bb299f404b0b34be87.html 8f8cbe94a804d7bee5df5b6cb0701702.html
13 | 69c1824746f1c6bb299f404b0b34be87.html 4c4123d6c4023c35fa40e8d0e40762bf.html
14 | 69c1824746f1c6bb299f404b0b34be87.html 49cdf42b0c6e7c623629734c1c1a44a6.html
15 | 69c1824746f1c6bb299f404b0b34be87.html ea5ec1bc6b046211cce54c44a2b69fd6.html
16 | 69c1824746f1c6bb299f404b0b34be87.html e1527a57bff25275f473fc8e510ce56.html
17 | 69c1824746f1c6bb299f404b0b34be87.html 1f25c4b862727550ae1193ea53ffec.html
18 | 69c1824746f1c6bb299f404b0b34be87.html 3459673e9401141c3b5531bc4d3475fd.html
19 | 69c1824746f1c6bb299f404b0b34be87.html 664e9cbdccd0540e19ea4c0fd5a77cc.html
20 | 69c1824746f1c6bb299f404b0b34be87.html 5c9ec75fdbca10b3a21d26df3156fbbcc.html
21 | 69c1824746f1c6bb299f404b0b34be87.html e74b6c094853981f8b7c1ccde49b28bc.html
22 | 69c1824746f1c6bb299f404b0b34be87.html a84a0014eb81605540234a56233719f1.html
23 | 69c1824746f1c6bb299f404b0b34be87.html 9ea9bf48e07f0903e6f70da2f4e47b04.html
24 | 69c1824746f1c6bb299f404b0b34be87.html 401fdbaea6231ba46b775b4d7c2ad69a.html
25 | 69c1824746f1c6bb299f404b0b34be87.html 86b5a380d7ab07340ce59e60d00e8310.html
26 | 69c1824746f1c6bb299f404b0b34be87.html 3d06dafa47c90021c00606b3fac9f82a.html
27 | 69c1824746f1c6bb299f404b0b34be87.html 32ccae51d0f425ab664c9a8891240f7f.html
28 | 69c1824746f1c6bb299f404b0b34be87.html f1be5e529111dfa18c15aa79dd6ed1c5.html
29 | 69c1824746f1c6bb299f404b0b34be87.html 132346bdb3dc0778190f2e4f6bc1407f.html
30 | 69c1824746f1c6bb299f404b0b34be87.html 8da923084554b2821233d6c5c5f02c97.html
31 | 69c1824746f1c6bb299f404b0b34be87.html ba174283cce569f904a7a84ec5413fd1.html
32 | 69c1824746f1c6bb299f404b0b34be87.html 5d415a9250115d697d6d8fa61c9c92c8.html
```

### Step5: Compute the pageRank score for all the web pages

1. Import Networkx library in python to compute the page rank.

2. Set the parameters of pagerank function

**alpha=0.85, personalization=None, max\_iter=30, tol=1e-06, nstart=None, weight='weight', dangling=None**

```
pageRank.py
```

```
1 import networkx as nx
2
3 graph = nx.read_edgelist("/Users/zejunliu/Desktop/HW4/edgesList.txt", create_using=nx.DiGraph())
4
5 pr = nx.pagerank(graph, alpha=0.85, personalization=None, max_iter=100, tol=1.0e-6, nstart=None, weight='weight',
6 outputFile = "/Users/zejunliu/Desktop/HW4/external_pageRankFile.txt"
7 f = open(outputFile, "w")
8 idPrefix = "/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/"
9 for id in pr:
10     f.write(idPrefix + id + "=" + str(pr[id]) + "\n")
11 f.close()
```

3. Run python PageRank.py, then I get external\_pageRankFile.txt file. Place the external\_pageRankFile.txt in the data folder of the core myexample.

#### 4. Add the field in the “managed-schema”

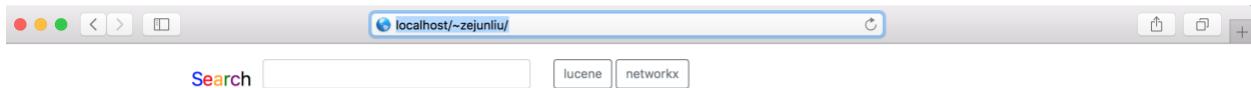
```
430    <!-- add pageRankFile -->
431    <fieldType name="external" keyField ="id" defVal="0" class="solr.ExternalFileField"/>
517    <!-- add pageRankFile -->
518    <field name = "pageRankFile" type="external" stored="false" indexed="false"/>
```

and define eventListeners in solrconfig.xml to reload the external file.

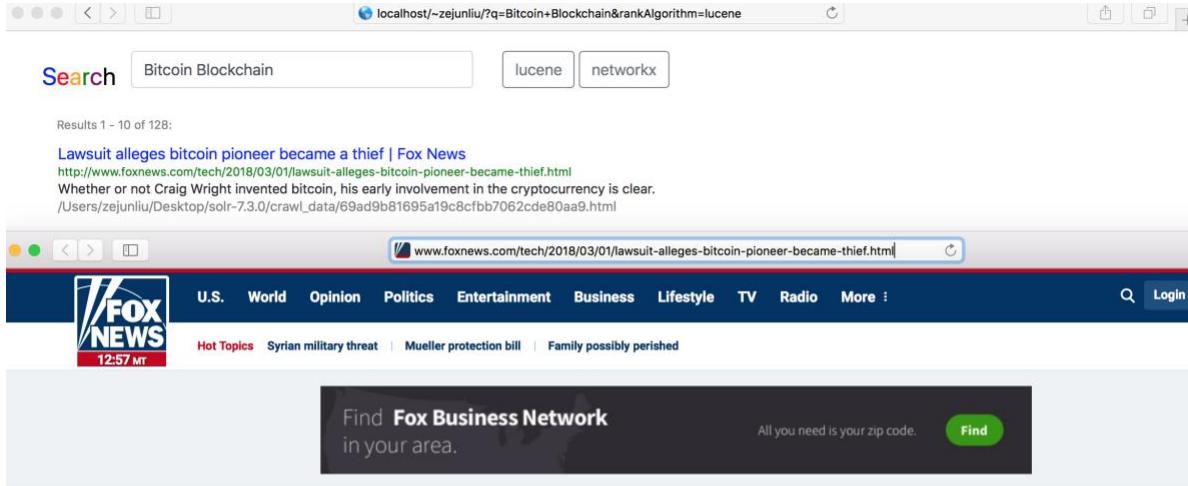
```
543    <!-- add external listener-->
544    <listener event="newSearcher" class="org.apache.solr.schema.ExternalFileFieldReloadListener"/>
545    <listener event="firstSearcher" class="org.apache.solr.schema.ExternalFileFieldReloadListener"/>
```

## 2. Document the flow for any single query using screenshots

### 2.1. Screenshot of initial page where I enter the query in input box:



### 2.2 Screenshot of the actual webpage that opens when clicking on one of the result's link.



## Lawsuit alleges bitcoin pioneer became a thief

By Arden Dier | [Newser](#)



## 2.3 Screenshot of page which shows the results for Lucene and PageRank.

### (1) Bitcoin Blockchain Query

#### Lucene Algorithm – Bitcoin Blockchain

The screenshot shows a web browser window with the following details:

- Address Bar:** localhost/~zejunliu/?q=Bitcoin+Blockchain&rankAlgorithm=lucene
- Search Bar:** Bitcoin Blockchain
- Filter Buttons:** lucene, networkx
- Results:** Results 1 – 10 of 128:
  - Lawsuit alleges bitcoin pioneer became a thief | Fox News**  
http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html  
Whether or not Craig Wright invented bitcoin, his early involvement in the cryptocurrency is clear.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/69ad9b81695a19c8cfbb7062cde80aa9.html
  - Lawsuit alleges bitcoin pioneer became a thief | Fox News**  
http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html  
Whether or not Craig Wright invented bitcoin, his early involvement in the cryptocurrency is clear.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/015ce645f77f26e2a99287ada6eea14c.html
  - Lawsuit alleges bitcoin pioneer became a thief | Fox News**  
http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html  
Whether or not Craig Wright invented bitcoin, his early involvement in the cryptocurrency is clear.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/8ddb24956d5a34a7f8503f0ea5897426.html
  - Arizona might allow people to pay taxes via bitcoin | Fox News**  
http://www.foxnews.com/politics/2018/02/07/arizona-might-allow-people-to-pay-taxes-via-bitcoin.html  
Digital currency can be used to pay for flights, furniture, music and even pizza. Now, pretty soon in Arizona, you may be able to use bitcoin to pay your taxes.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/7676e0854b64dd5c2570f949b4f5a54f.html
  - Hackers steal as much as 10 percent of new cryptocurrency funds | Fox News**  
http://www.foxnews.com/tech/2018/01/24/hackers-steal-as-much-as-10-percent-new-cryptocurrency-funds.html  
Whenever a new cryptocurrency is launched, it usually goes through an initial coin offer where investors are brought in to get it off the ground. As much as 10 percent of those funds though, are being stolen by hackers.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/cd0382bf5179f59fb337a2d52aa233e.html
  - Lawsuit alleges bitcoin pioneer became a thief | Fox News**  
http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html  
Whether or not Craig Wright invented bitcoin, his early involvement in the cryptocurrency is clear.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/e0520682f158a81280f270e67031384d.html
  - Lawsuit alleges bitcoin pioneer became a thief | Fox News**  
http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html  
Whether or not Craig Wright invented bitcoin, his early involvement in the cryptocurrency is clear.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/169ea197c44f5e00d89189b18ba72f14.html
  - Hackers steal as much as 10 percent of new cryptocurrency funds | Fox News**  
http://www.foxnews.com/tech/2018/01/24/hackers-steal-as-much-as-10-percent-new-cryptocurrency-funds.html  
Whenever a new cryptocurrency is launched, it usually goes through an initial coin offer where investors are brought in to get it off the ground. As much as 10 percent of those funds though, are being stolen by hackers.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/ae301639fb671cf1787556a8d31b4042.html
  - Smartwatches, better TV reception, Bitcoin investments and more: Tech Q&A | Fox News**  
http://www.foxnews.com/tech/2018/03/03/smartwatches-better-tv-reception-bitcoin-investments-and-more-tech-q.html  
Bitcoins! I want to know all about them and how I can make a million dollars!  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/d87e8c6a44bba53433a2fb4461553a5.html
  - Smartwatches, better TV reception, Bitcoin investments and more: Tech Q&A | Fox News**  
http://www.foxnews.com/tech/2018/03/03/smartwatches-better-tv-reception-bitcoin-investments-and-more-tech-q.html  
Bitcoins! I want to know all about them and how I can make a million dollars!  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/982d1ad9c7b7ce297b557091f1c466b7.html

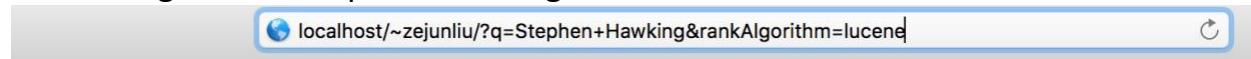
## Networkx Algorithm – Bitcoin Blockchain

The screenshot shows a search interface with the URL [localhost/~zejunliu/?q=Bitcoin+Blockchain&rankAlgorithm=networkx](http://localhost/~zejunliu/?q=Bitcoin+Blockchain&rankAlgorithm=networkx). The search term "Bitcoin Blockchain" is entered in the search bar. Below the search bar are two buttons: "lucene" and "networkx". The results section displays 128 items, with the first few listed below:

- Fox News - Breaking News Updates | Latest News Headlines | Photos & News Videos**  
<http://www.foxnews.com>  
Most Watched. Most Trusted.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/e74b6c094853981f8b7c1ccde49b28bc.html`
- Computers | Fox News**  
<http://www.foxnews.com/category/tech/topics/computers.html>  
NA  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/0ede0789a7d2894ab85abf49a76b7504.html`
- Fox News - Breaking News Updates | Latest News Headlines | Photos & News Videos**  
<http://www.foxnews.com>  
Most Watched. Most Trusted.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/8da923084554b2821233d6c5c5f02c97.html`
- Canadian CEO arrested in US on charges of supplying encrypted phones to Mexican cartels | Fox News**  
[http://www.foxnews.com/tech/2018/03/15\(canadian-ceo-arrested-in-us-on-charges-supplying-encrypted-phones-to-mexican-cartels.html](http://www.foxnews.com/tech/2018/03/15(canadian-ceo-arrested-in-us-on-charges-supplying-encrypted-phones-to-mexican-cartels.html)  
U.S. authorities last week arrested the head of a Canadian company that allegedly sold encrypted cellphones to Mexican drug cartels – shedding light on the growing use of private communications networks among organized crime groups looking to avoid the prying ears of the law.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/31a78f536e183e40f14c77666df97a2d.html`
- Equifax breach worsens, sparking more concerns about consumers' data | Fox News**  
<http://www.foxnews.com/tech/2018/03/02/equifax-breach-worsens-sparking-more-concerns-about-consumers-data.html>  
Equifax has confirmed that the massive data breach announced by the company last year is largely than previously thought, affecting an additional 2.4 million U.S. consumers.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/a84bac40b936f5e9cffc56ac77fc438d.html`
- Biggest DDoS attack on record hits Github | Fox News**  
<http://www.foxnews.com/tech/2018/03/02/biggest-ddos-attack-on-record-hits-github.html>  
A new way to amplify distributed denial-of-service attacks ended up harassing Github on Wednesday.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/7a5ca3ead4e8e65c5794756ef9db37be.html`
- Hackers hijack Tesla system in bold cryptocurrency attack | Fox News**  
<http://www.foxnews.com/tech/2018/02/22/hackers-hijack-tesla-system-in-bold-cryptocurrency-attack.html>  
Tesla has become the latest target of hackers attempting to "mine" cryptocurrency, according to cloud security company RedLock.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/17600c4a82bd209c86c90fdc0fc55284.html`
- Tech Q&A: Dueling assistants, outsmarting hackers, blocking texts, and more | Fox News**  
<http://www.foxnews.com/tech/2018/02/04/tech-q-dueling-assistants-outsmarting-hackers-blocking-texts-and-more.html>  
Want to know how to choose the best virtual assistant, outsmart hackers, and block texts? Then read this column.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/054eb9b00e18ba94657e37edfc64914b.html`
- Are your office computers mining cryptocurrency? | Fox News**  
<http://www.foxnews.com/tech/2018/03/14/are-your-office-computers-mining-cryptocurrency.html>  
Using your office computer for personal use is one thing, but what about installing a cryptocurrency miner?  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/ddd41c2adaf72064438b33e03ea044ba.html`
- Scary ransomware attacks famous North Carolina county | Fox News**  
<http://www.foxnews.com/tech/2017/12/06/scary-ransomware-attacks-famous-north-carolina-county.html>  
A ransomware attack has forced the shutdown of a host of IT systems at Mecklenburg County.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/60c1f1eb1b0509758c82a4503129153a.html`

## (2) Stephen Hawking Query

### Lucene Algorithm- Stephen Hawking



Results 1 - 10 of 919:

#### A look back on the life of renowned physicist Stephen Hawking | Fox News

<http://www.foxnews.com/science/slideshow/2018/03/14/look-back-on-life-renowned-physicist-stephen-hawking.html>

Renowned physicist Stephen Hawking died Wednesday at the age of 76.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/96039c86b6584cf266dfc5e892cd00e2.html

#### A look back on the life of renowned physicist Stephen Hawking | Fox News

<http://www.foxnews.com/science/slideshow/2018/03/14/look-back-on-life-renowned-physicist-stephen-hawking.html>

Renowned physicist Stephen Hawking died Wednesday at the age of 76.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/c0e5ba375b7fd8f331ca09e7a2237de8.html

#### How Stephen Hawking transformed our understanding of black holes | Fox News

<http://www.foxnews.com/science/2018/03/16/how-stephen-hawking-transformed-our-understanding-black-holes.html>

There's a lot we still don't know about black holes, but these light-gobbling behemoths would be even more mysterious if Stephen Hawking hadn't plumbed their inky depths.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/fbb3754473ce41dc76fcf66599bf1ab7.html

#### How Stephen Hawking transformed our understanding of black holes | Fox News

<http://www.foxnews.com/science/2018/03/16/how-stephen-hawking-transformed-our-understanding-black-holes.html>

There's a lot we still don't know about black holes, but these light-gobbling behemoths would be even more mysterious if Stephen Hawking hadn't plumbed their inky depths.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/718b48e82cd3b44b44e3eedc259c491e.html

#### Stephen Hawking unlocked a 'universe of possibilities,' NASA says | Fox News

<http://www.foxnews.com/science/2018/03/14/stephen-hawking-unlocked-universe-possibilities-nasa-says.html>

Tributes are pouring in for famed physicist Stephen Hawking, who died early on Wednesday. He was 76 years of age.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/b382e6efafab976168d4f8568f2fa2d.html

#### Stephen Hawking unlocked a 'universe of possibilities,' NASA says | Fox News

<http://www.foxnews.com/science/2018/03/14/stephen-hawking-unlocked-universe-possibilities-nasa-says.html>

Tributes are pouring in for famed physicist Stephen Hawking, who died early on Wednesday. He was 76 years of age.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/593d8d155ff9eaa9af4a898c55e3c653.html

#### Stephen Hawking, famed physicist, dead at 76 | Fox News

<http://www.foxnews.com/science/2018/03/14/stephen-hawking-famed-physicist-dead-at-76.html>

Stephen Hawking, the famed theoretical physicist who defied a diagnosis of amyotrophic lateral sclerosis to live virtually his entire adult life with the disease – in a wheelchair and paralyzed but making constant contributions to a world few could understand – has died at age 76, a family spokesman said.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/bd5eb1ed9fc572c5cc33bfcaedb463d0.html

#### Stephen Hawking, famed physicist, dead at 76 | Fox News

<http://www.foxnews.com/science/2018/03/14/stephen-hawking-famed-physicist-dead-at-76.html>

Stephen Hawking, the famed theoretical physicist who defied a diagnosis of amyotrophic lateral sclerosis to live virtually his entire adult life with the disease – in a wheelchair and paralyzed but making constant contributions to a world few could understand – has died at age 76, a family spokesman said.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/dc3b6b8957f2e72ce9b4c91e11e05ad5.html

#### Stephen Hawking: Tech execs remember legacy of famed physicist | Fox News

<http://www.foxnews.com/tech/2018/03/14/stephen-hawking-tech-execs-remember-legacy-famed-physicist.html>

Tech executives, ranging from Apple CEO Tim Cook to Google CEO Sundar Pichai weighed in on Stephen Hawking's passing, remembering his contributions to science and humanity.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/bf2fae52eb32fb9e908e92e9fb5ab58.html

#### Stephen Hawking: Tech execs remember legacy of famed physicist | Fox News

<http://www.foxnews.com/tech/2018/03/14/stephen-hawking-tech-execs-remember-legacy-famed-physicist.html>

Tech executives, ranging from Apple CEO Tim Cook to Google CEO Sundar Pichai weighed in on Stephen Hawking's passing, remembering his contributions to science and humanity.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/39d4bd2ec2870ee7d5d9c3c2c9e09ecd.html

## Networkx Algorithm- Stephen Hawking

A screenshot of a web-based search interface. At the top, there is a header bar with the text "localhost/~zejunliu/?q=Stephen+Hawking&rankAlgorithm=networkx". Below the header is a search bar containing the query "Stephen Hawking". To the right of the search bar are two buttons labeled "lucene" and "networkx". The main content area displays search results, starting with a link to Fox News.

Search

Stephen Hawking

lucene

networkx

Results 1 - 10 of 919:

### Science | Latest News and Videos on Astronomy, the Environment and Wildlife | Fox News

<http://www.foxnews.com/science.html>

Biology, astronomy, chemistry, physics on FoxNews.com. In-depth natural science news. Headlines from the worlds of biology, astronomy, chemistry and physics.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/8f8cbe94a804d7bee5df5b6cb0701702.html

### Opinion | Opinion & Analysis on the Latest Breaking News | Fox News

<http://www.foxnews.com/opinion.html>

NA

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/f7246d5affdc5267c8e07222130d9007.html

### Entertainment | Latest News, Videos & Photos on Celebrities, Movies & Music | Fox News

<http://www.foxnews.com/entertainment.html>

Celebrity gossip and entertainment news from FOXNews.com. Celebrity gossip, fashion, travel, lifestyle and arts and entertainment news headlines plus in-depth features and video clips.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/74203677b3a93832f91003adc6ad131c.html

### Security | Fox News

<http://www.foxnews.com/category/tech/topics/security.html>

Security news articles and videos from FoxNews.com's Tech section.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/86151d5d95b7811ecdbc2c30f8beddd9.html

### GLOBAL ECONOMY | Fox News

<http://www.foxnews.com/category/world/global-economy.html>

NA

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/0c23554e234fe5b946f260aeb687e5fb.html

### Personal Freedoms | Fox News

<http://www.foxnews.com/category/us/personal-freedoms.html>

NA

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/9c8adc2844022347d6921a7b4e843305.html

### NATURAL SCIENCE | Fox News

<http://www.foxnews.com/category/science/natural-science.html>

NA

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/114110b56cb96b06585360efdf2f6107.html

### AIR AND SPACE | Fox News

<http://www.foxnews.com/category/science/air-and-space.html>

NA

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/c1e6eaf14928094a4951aeb1a32ed6a3.html

### Technology Photos | Technology | Fox News

<http://www.foxnews.com/tech/slideshow.html>

Technology photos and slideshows on Fox News.com

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/c67698d5ea4766209daa0fbffd32333c.html

### Science Photos | Science | Fox News

<http://www.foxnews.com/science/slideshow.html>

Science photos and slideshows on Fox News.com

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/1ea1e65da1d9ba87aeda0935a227f5be.html

### (3) Falcon Heavy Query

#### Lucene Algorithm- Falcon Heavy

The screenshot shows a search interface with a search bar containing 'localhost/~zejunliu/?q=Falcon+Heavy&rankAlgorithm=lucene'. Below the search bar are three buttons: 'Search' (highlighted in red), 'lucene' (highlighted in green), and 'networkx' (highlighted in blue). The results section displays 10 items from a total of 954, all related to the Falcon Heavy rocket.

Results 1 - 10 of 954:

##### [How the SpaceX Falcon Heavy rocket compares to Elon Musk's other powerful spacecraft | Fox News](http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html)

SpaceX's Elon Musk is getting ready to launch one of the biggest – and most powerful – spacecrafts the world has ever seen: the Falcon Heavy rocket.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/50e5f079974655b914fa7f3d7f2e383c.html

##### [How the SpaceX Falcon Heavy rocket compares to Elon Musk's other powerful spacecraft | Fox News](http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html)

SpaceX's Elon Musk is getting ready to launch one of the biggest – and most powerful – spacecrafts the world has ever seen: the Falcon Heavy rocket.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/28fb7ffd5cdbf246b3af9fa4e18f0a46.html

##### [SpaceX Falcon Heavy rocket launches successfully | Fox News](http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html)

SpaceX's Falcon Heavy rocket has launched successfully, making history as the world's most powerful rocket.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/e888d7cc6c6ee19291493b9888c77e1f.html

##### [How the SpaceX Falcon Heavy rocket compares to Elon Musk's other powerful spacecraft | Fox News](http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html)

SpaceX's Elon Musk is getting ready to launch one of the biggest – and most powerful – spacecrafts the world has ever seen: the Falcon Heavy rocket.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/5b7822a0d894d02f1917337be3937e1e.html

##### [How the SpaceX Falcon Heavy rocket compares to Elon Musk's other powerful spacecraft | Fox News](http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html)

SpaceX's Elon Musk is getting ready to launch one of the biggest – and most powerful – spacecrafts the world has ever seen: the Falcon Heavy rocket.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/d9a9546c5aa02fd4314fc9267c15bc1d.html

##### [How the SpaceX Falcon Heavy rocket compares to Elon Musk's other powerful spacecraft | Fox News](http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html)

SpaceX's Falcon Heavy rocket is getting ready to launch one of the biggest – and most powerful – spacecrafts the world has ever seen: the Falcon Heavy rocket.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/6101c660c59b3c177df31e48318bca26.html

##### [SpaceX Falcon Heavy rocket launches successfully | Fox News](http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html)

SpaceX's Falcon Heavy rocket has launched successfully, making history as the world's most powerful rocket.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/e379a36082d15dbb9fc1dd32cb1d9ac5.html

##### [SpaceX Falcon Heavy launch preview: What, when and why | Fox News](http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-launch-preview-what-when-and-why.html)

Known for big statements and bigger bets, as well as spectacular surprises and failures, SpaceX's Elon Musk is attempting his biggest – or heaviest – venture yet. Launching the world's most powerful rocket, the Falcon Heavy.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/5a9c5ee41ea2679adb9df34f2274b37.html

##### [SpaceX Falcon Heavy rocket launches successfully | Fox News](http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html)

SpaceX's Falcon Heavy rocket has launched successfully, making history as the world's most powerful rocket.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/013063d9c246e4ad622cf1f1071afe6.html

##### [Elon Musk has launched Falcon Heavy, but how long does it take to get to Mars? | Fox News](http://www.foxnews.com/science/2018/02/07/elon-musk-has-launched-falcon-heavy-but-how-long-does-it-take-to-get-to-mars.html)

Ever wondered how long it would take to get to Mars?  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/2d21330a64bef8bf1075c1239cf578a7.html

## Networkx Algorithm- Falcon Heavy

The screenshot shows a search interface with a search bar containing 'Falcon Heavy'. Below the search bar are two buttons: 'lucene' and 'networkx'. The results page displays 10 out of 954 items, each with a title, URL, and a brief description.

Results 1 - 10 of 954:

**Security | Fox News**  
http://www.foxnews.com/category/tech/topics/security.html  
Security news articles and videos from FoxNews.com's Tech section.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/86151d5d95b7811ecdbc2c30f8beddd9.html

**ELECTIONS | Fox News**  
http://www.foxnews.com/category/politics/elections.html  
Elections news articles and videos from FoxNews.com's Politics section.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/51687fe4fc2c6b184709ea57fe93defa.html

**MENTAL HEALTH | Fox News**  
http://www.foxnews.com/category/health/mental-health.html  
NA  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/b9fba8f1000c5042ef9b9d9420e768f7.html

**Disasters | Fox News**  
http://www.foxnews.com/category/world/disasters.html  
NA  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/6bc99b6aefdf01cec3f8be5e128fd62f.html

**Weather | Fox News**  
http://www.foxnews.com/weather/your-weather/index.html  
Your Weather forecast updated hourly from FOXNews.com.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/a853ae2a38c1dd52f9e616255e69aa6d.html

**Weather News | U.S. Weather | International Weather**  
http://www.foxnews.com/weather/index.html  
National and International weather forecasts from FOXNews.com. Weather forecast, severe weather, airport delays, travel plus regional video forecasts.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/95340973a86c2b8c694b681efd188f85.html

**Weather Photos | Weather | Fox News**  
http://www.foxnews.com/weather/slideshows/index.html  
Weather photos and slideshows on Fox News.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/0b9d29e74c08bfbb3bf1978a23c083c1.html

**Photos | Fox News**  
http://www.foxnews.com/slideshows/index.html  
View latest slideshows on Fox News.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/5f7392a1c64fb1aff48dd1a79d62f9f0.html

**Weather | Fox News**  
http://www.foxnews.com/weather/your-weather/index.html  
Your Weather forecast updated hourly from FOXNews.com.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/e60a8b887796d0159dbd417b5da0c035.html

**World Photos | World | Fox News**  
http://www.foxnews.com/world/slideshow.html  
NA  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/5f542801170bb4948401bd74afe71dcb.html

## (4) Syrian War Query

### Lucene Algorithm- Syrian War

The screenshot shows a search interface with the URL [localhost/~zejunliu/?q=Syrian+War&rankAlgorithm=lucene](http://localhost/~zejunliu/?q=Syrian+War&rankAlgorithm=lucene). The search bar contains "Syrian War". Below the search bar are three buttons: "Search" (highlighted in blue), "lucene" (gray), and "networkx" (gray). The results page displays 3412 items, with the first few listed below:

**Syria marks 7 years of war; hundreds leave besieged enclave | Fox News**  
<http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html>  
Hundreds of civilians streamed out of a town in Syria's besieged, opposition-held enclave of eastern Ghouta on Thursday, crossing on foot to government-held territory near the capital, Damascus, according to footage on state-run Syrian television.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/a4fe00e63ac850dff09b4fdb1ae0bfa.html

**Syria marks 7 years of war; hundreds leave besieged enclave | Fox News**  
<http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html>  
Hundreds of civilians streamed out of a town in Syria's besieged, opposition-held enclave of eastern Ghouta on Thursday, crossing on foot to government-held territory near the capital, Damascus, according to footage on state-run Syrian television.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/f5966dcbf736ce26b045e8c6d2decabc.html

**Syria marks 7 years of war; hundreds leave besieged enclave | Fox News**  
<http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html>  
Hundreds of civilians streamed out of a town in Syria's besieged, opposition-held enclave of eastern Ghouta on Thursday, crossing on foot to government-held territory near the capital, Damascus, according to footage on state-run Syrian television.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/f23aa338325c2363d8c44f493e5f928a.html

**Syria marks 7 years of war; hundreds leave besieged enclave | Fox News**  
<http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html>  
Hundreds of civilians streamed out of a town in Syria's besieged, opposition-held enclave of eastern Ghouta on Thursday, crossing on foot to government-held territory near the capital, Damascus, according to footage on state-run Syrian television.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/9281ab7207967f65ff14b62856e9b9db.html

**Syria marks 7 years of war; hundreds leave besieged enclave | Fox News**  
<http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html>  
Hundreds of civilians streamed out of a town in Syria's besieged, opposition-held enclave of eastern Ghouta on Thursday, crossing on foot to government-held territory near the capital, Damascus, according to footage on state-run Syrian television.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/e3342194c4ea99036a9022d786184c8.html

**Rep. Adam Kinzinger: It's for the US to lead on Syria. Failure to act is failure by all of us | Fox News**  
<http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html>  
This week marks the start of the eighth year of the Syrian War.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/1a22d38e259544d83b89001b61236bd2.html

**Rep. Adam Kinzinger: It's for the US to lead on Syria. Failure to act is failure by all of us | Fox News**  
<http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html>  
This week marks the start of the eighth year of the Syrian War.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/6e067e21ce174d03a145ba455eb0f848.html

**New Trump travel ban can't be enforced on Syrian family trying to flee to Wisconsin, judge says | Fox News**  
<http://www.foxnews.com/politics/2017/03/10/new-trump-travel-ban-can-be-enforced-on-syrian-family-trying-to-flee-to-wisconsin-judge-says.html>  
A federal judge on Friday blocked President Trump's administration from enforcing his new travel ban against a Syrian family looking to escape their war-torn homeland by fleeing to Wisconsin.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/bebdff2355b36e62b501b86cfb41dbafe.html

**Rep. Adam Kinzinger: It's for the US to lead on Syria. Failure to act is failure by all of us | Fox News**  
<http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html>  
This week marks the start of the eighth year of the Syrian War.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/2d3dbb4966f9df412f3414084d81a639.html

**In Istanbul's 'Little Syria,' refugees want more from US | Fox News**  
<http://www.foxnews.com/world/2017/04/08/in-istanbul-little-syria-refugees-want-more-from-us.html>  
The fast-moving developments in Syria are never far from people's minds in an Istanbul neighborhood that is home to thousands of refugees from the country's civil war.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/b74a8f8c3df9441477a0c2c0d15fd0e8.html

## Networkx Algorithm-Syrian War

The screenshot shows a search interface with the following details:

- Search Bar:** The search term "Syrian War" is entered.
- Filter Buttons:** Buttons for "lucene" and "networkx" are visible.
- Results Count:** "Results 1 - 10 of 3412:"
- Result 1: World | Fox News**
  - Title:** World | Fox News
  - URL:** <http://www.foxnews.com/world.html>
  - Description:** Latest world news, international news, world video, international video on Fox News.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/d0ba9c4c1010d13413f1c4beee913e99.html
- Result 2: US | Fox News**
  - Title:** US | Fox News
  - URL:** <http://www.foxnews.com/us.html>
  - Description:** Fox news features local news and national news articles and videos.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/5d415a9250115d697d6d8fa61c9c92c8.html
- Result 3: Science | Latest News and Videos on Astronomy, the Environment and Wildlife | Fox News**
  - Title:** Science | Latest News and Videos on Astronomy, the Environment and Wildlife | Fox News
  - URL:** <http://www.foxnews.com/science.html>
  - Description:** Biology, astronomy, chemistry, physics on FoxNews.com. In-depth natural science news. Headlines from the worlds of biology, astronomy, chemistry and physics.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/8f8cbe94a804d7bee5df5b6cb0701702.html
- Result 4: Opinion | Opinion & Analysis on the Latest Breaking News | Fox News**
  - Title:** Opinion | Opinion & Analysis on the Latest Breaking News | Fox News
  - URL:** <http://www.foxnews.com/opinion.html>
  - Description:** NA
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/f7246d5affdc5267c8e07222130d9007.html
- Result 5: Fox News Shows | Fox News**
  - Title:** Fox News Shows | Fox News
  - URL:** <http://www.foxnews.com/shows.html>
  - Description:** Fox News TV Shows - Complete list of Fox News shows online, listings and schedules. Watch O'Reilly Factor, Fox & Friends and Special Report web shows, full episodes, video clips and participate in live chats.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/f64f3cd94af0cb599dc63cf7e772724d.html
- Result 6: Cars + Trucks | Fox News**
  - Title:** Cars + Trucks | Fox News
  - URL:** <http://www.foxnews.com/auto.html>
  - Description:** Automotive news, automotive industry, cars, trucks, SUVs
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/39203edf6f73dff637428cbeb173fe0d.html
- Result 7: ARCHAEOLOGY | Fox News**
  - Title:** ARCHAEOLOGY | Fox News
  - URL:** <http://www.foxnews.com/category/science/archaeology.html>
  - Description:** Archaeology news articles and videos from FoxNews.com's Science section.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/638264caa30b54c6cb7527ae01bf91bc.html
- Result 8: Innovation | Fox News**
  - Title:** Innovation | Fox News
  - URL:** <http://www.foxnews.com/category/tech/topics/innovation.html>
  - Description:** Innovation news articles and videos from FoxNews.com's Tech section.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/35c01374fbc1040bad837c05ac6b9d57.html
- Result 9: Military | Fox News**
  - Title:** Military | Fox News
  - URL:** <http://www.foxnews.com/category/us/military.html>
  - Description:** Military news articles and videos from foxnews.com's US section
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/6950dcf1507d3463a22391ea78852cd9.html
- Result 10: ELECTIONS | Fox News**
  - Title:** ELECTIONS | Fox News
  - URL:** <http://www.foxnews.com/category/politics/elections.html>
  - Description:** Elections news articles and videos from FoxNews.com's Politics section.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/51687fe4fc2c6b184709ea57fe93defa.html

## (5) LA Rams Query

### Lucene Algorithm- LA Rams



Results 1 - 10 of 1653:

#### Rams add former UCLA offensive coordinator Jedd Fisch to staff | Fox News

<http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html>  
Fisch has 20 years coaching experience.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/8d8ccc80da665214bab524e927331f95.html

#### Rams add former UCLA offensive coordinator Jedd Fisch to staff | Fox News

<http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html>  
Fisch has 20 years coaching experience.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/3ea357d55066e2ce5ec868d7e9adb5b3.html

#### Jim Kelly draws on experience in campaign against cancer | Fox News

<http://www.foxnews.com/sports/2017/01/25/jim-kelly-draws-on-experience-in-campaign-against-cancer.html>  
ORCHARD PARK, N.Y. (AP) For all his achievements, Jim Kelly's life has been tempered with professional and personal heartbreak.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/b403d96239f2f1c2d315ddb886b8a03d.html

#### Rams add former UCLA offensive coordinator Jedd Fisch to staff | Fox News

<http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html>  
Fisch has 20 years coaching experience.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/d328b03aa50299d6760c5406f9dc183b.html

#### Rams add former UCLA offensive coordinator Jedd Fisch to staff | Fox News

<http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html>  
Fisch has 20 years coaching experience.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/35b39f1ca0709f5bd3dbcaa8771b162f.html

#### Rams add former UCLA offensive coordinator Jedd Fisch to staff | Fox News

<http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html>  
Fisch has 20 years coaching experience.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/40b16beb1b1fa3e546576d88be2bb00.html

#### A Tesla allegedly on Autopilot rams into the back of fire truck | Fox News

<http://www.foxnews.com/auto/2018/01/23/tesla-allegedly-on-autopilot-rams-into-back-fire-truck.html>  
Tesla says you still have to pay attention.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/98094a6145e9fe046224de8e50b13fb.html

#### Super Bowl protesters to take a knee in Minneapolis with rally against police brutality | Fox News

<http://www.foxnews.com/us/2018/02/04/super-bowl-protesters-to-take-knee-in-minneapolis-with-rally-against-police-brutality.html>  
Amidst a national conversation about police brutality and athletes' protests during the national anthem, organizers, students and victims of police violence will gather in Minneapolis not far from where Super Bowl 52 is taking place.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/1145cefb66607bedcf38e9855df649b3.html

#### Super Bowl protesters to take a knee in Minneapolis with rally against police brutality | Fox News

<http://www.foxnews.com/us/2018/02/04/super-bowl-protesters-to-take-knee-in-minneapolis-with-rally-against-police-brutality.html>  
Amidst a national conversation about police brutality and athletes' protests during the national anthem, organizers, students and victims of police violence will gather in Minneapolis not far from where Super Bowl 52 is taking place.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/0e93efae94aa45398de4ed305580f5c0.html

#### Terrorism eyed after driver rams into pedestrian in Philadelphia | Fox News

<http://www.foxnews.com/us/2018/01/29/off-duty-cop-shoots-driver-attempting-to-run-over-pedestrians-philadelphia-police-say.html>  
Terrorism was being eyed as a possible motive after a man in a black Honda hit a pedestrian Monday morning in Philadelphia, seriously injuring one person before being shot in the head by an off-duty cop, officials said.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/b0a3e19621d2fd7729a9d05a787b7bc2.html

## Networkx Algorithm- LA Rams

The screenshot shows a search interface with the following details:

- Search Bar:** Contains the query "LA Rams".
- Filter Buttons:** "lucene" and "networkx".
- Results Count:** "Results 1 - 10 of 1653:"
- Result 1:**
  - Title:** Technology | Internet, Mobile, and Social Media News | Fox News
  - URL:** <http://www.foxnews.com/tech.html>
  - Description:** News for Hardware, software, networking, and Internet media. Reporting on information technology, technology and business news.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/40426b57ce4acf76b2fbf4562f389b42.html
- Result 2:**
  - Title:** Lifestyle | Fox News
  - URL:** <http://www.foxnews.com/lifestyle.html>
  - Description:** Lifestyle, Auto, Food & Drink, and Home & Garden online news and information
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/ac6c6c21a9071c0b0cf38345b331f5c4.html
- Result 3:**
  - Title:** Fox News - Breaking News Updates | Latest News Headlines | Photos & News Videos
  - URL:** <http://www.foxnews.com>
  - Description:** Most Watched. Most Trusted.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/e74b6c094853981f8b7c1ccde49b28bc.html
- Result 4:**
  - Title:** Style and Beauty | Fox News
  - URL:** <http://www.foxnews.com/category/style-and-beauty.html>
  - Description:** Articles and videos about Style and Beauty on Fox News
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/2f5d00a0aea0a2a30fb7398174564543.html
- Result 5:**
  - Title:** ELECTIONS | Fox News
  - URL:** <http://www.foxnews.com/category/politics/elections.html>
  - Description:** Elections news articles and videos from FoxNews.com's Politics section.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/51687fe4fc2c6b184709ea57fe93defa.html
- Result 6:**
  - Title:** Fox News - Breaking News Updates | Latest News Headlines | Photos & News Videos
  - URL:** <http://www.foxnews.com>
  - Description:** Most Watched. Most Trusted.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/8da923084554b2821233d6c5c5f02c97.html
- Result 7:**
  - Title:** Cavuto Live | Fox News
  - URL:** <http://www.foxnews.com/shows/cavuto-live.html>
  - Description:** NA
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/bc3a0085c2da5a15a800309bd73486c2.html
- Result 8:**
  - Title:** Shepard Smith | Fox News
  - URL:** <http://www.foxnews.com/on-air/shepard-smith>
  - Description:** When News Breaks Out, We Break In – watch Shepard Smith Reporting weekdays at 3 PM ET on Fox News Channel.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/8c2147bcfda5ef63b886851bdb626ee2.html
- Result 9:**
  - Title:** Fox News Specials | Fox News
  - URL:** <http://www.foxnews.com/shows/fox-news-specials.html>
  - Description:** NA
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/683ebf25c9c0c4d44dd582bbc02d19d2.html
- Result 10:**
  - Title:** Fox & Friends First | Fox News
  - URL:** <http://www.foxnews.com/on-air/fox-and-friends-first>
  - Description:** FOX & Friends FIRST is presented prior to the network's signature morning show, previewing the day ahead by covering the latest news headlines in politics, business, entertainment and health.
  - Path:** /Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/16bd6315677dcb43161880a12c1e7c00.html

## (6) Black Panther Query

### Lucene Algorithm- Black Panther

The screenshot shows a search interface with a URL bar containing `localhost/~zejunliu/?q=Black+Panther&rankAlgorithm=lucene`. Below the URL bar are three buttons: "Search" (highlighted in blue), "Black Panther" (disabled), "lucene" (highlighted in blue), and "networkx". The main area displays search results:

Results 1 - 10 of 1679:

**Stan Lee, 95, 'feeling great' after return from LA hospital | Fox News**  
<http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html>  
After being rushed to a hospital Wednesday night, legendary comic book artist Stan Lee confirmed Thursday that he was back home and doing well.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/69fd08413af7aa57d89b8378bd860cf8.html`

**Stan Lee, 95, 'feeling great' after return from LA hospital | Fox News**  
<http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html>  
After being rushed to a hospital Wednesday night, legendary comic book artist Stan Lee confirmed Thursday that he was back home and doing well.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/8cfbb6112f4d8c8f42cb9dd4802fef84.html`

**Stan Lee, 95, 'feeling great' after return from LA hospital | Fox News**  
<http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html>  
After being rushed to a hospital Wednesday night, legendary comic book artist Stan Lee confirmed Thursday that he was back home and doing well.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/146a30dc4e9366db411187cf87af4f86.html`

**Stan Lee robbed of \$1.4M, report says | Fox News**  
<http://www.foxnews.com/entertainment/2018/02/28/stan-lee-robbbed-1-4m-report-says.html>  
Legendary comic book writer Stan Lee was reportedly robbed of \$1.4 million.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/829ebd39bc8136a8d592e29cd5d4cd2b.html`

**FIU bridge collapse sparks reaction from politicians, lawmakers | Fox News**  
<http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html>  
A bridge collapse Thursday at Florida International University left several people dead, Fox News has learned.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/184d34b90af1845e1fa4000527012a62.html`

**Twitter's purge of far-right accounts sparks backlash, praise and confusion | Fox News**  
<http://www.foxnews.com/tech/2017/12/20/twitters-purge-far-right-accounts-sparks-backlash-praise-and-confusion.html>  
Twitter began enforcing its new rules on hate speech and abuse on Monday, suspending a number of far-right accounts including those linked to prominent white nationalists and neo-Nazis, prompting responses that range from defiance to praise and bafflement.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/6e0eac2e6bf9df5da3e8656cbad54162.html`

**Twitter's purge of far-right accounts sparks backlash, praise and confusion | Fox News**  
<http://www.foxnews.com/tech/2017/12/20/twitters-purge-far-right-accounts-sparks-backlash-praise-and-confusion.html>  
Twitter began enforcing its new rules on hate speech and abuse on Monday, suspending a number of far-right accounts including those linked to prominent white nationalists and neo-Nazis, prompting responses that range from defiance to praise and bafflement.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/b8c4d649672a0d71b8065baff3f2cfde.html`

**FIU bridge collapse sparks reaction from politicians, lawmakers | Fox News**  
<http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html>  
A bridge collapse Thursday at Florida International University left several people dead, Fox News has learned.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/4f3cd8c0f90b7e6045e329bffd285397.html`

**FIU bridge collapse sparks reaction from politicians, lawmakers | Fox News**  
<http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html>  
A bridge collapse Thursday at Florida International University left several people dead, Fox News has learned.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/b7c35202afaf36e6176983e24bd01f93.html`

**FIU bridge collapse sparks reaction from politicians, lawmakers | Fox News**  
<http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html>  
A bridge collapse Thursday at Florida International University left several people dead, Fox News has learned.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/1c9c7452581d7731b4399f59a8cb74d8.html`

## Networkx Algorithm- Black Panther

The screenshot shows a search interface with the URL `localhost/~zejunliu/?q=Black+Panther&rankAlgorithm=networkx`. The search bar contains "Black Panther". Below the search bar are two buttons: "lucene" and "networkx". The results section displays 10 out of 1679 items, all from Fox News. The results are as follows:

- US | Fox News**  
<http://www.foxnews.com/us.html>  
Fox news features local news and national news articles and videos.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/5d415a9250115d697d6d8fa61c9c92c8.html`
- Science | Latest News and Videos on Astronomy, the Environment and Wildlife | Fox News**  
<http://www.foxnews.com/science.html>  
Biology, astronomy, chemistry, physics on FoxNews.com. In-depth natural science news. Headlines from the worlds of biology, astronomy, chemistry and physics.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/8f8cbe94a804d7bee5df5b6cb0701702.html`
- Lifestyle | Fox News**  
<http://www.foxnews.com/lifestyle.html>  
Lifestyle, Auto, Food & Drink, and Home & Garden online news and information  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/ac6c6c21a9071c0b0cf38345b331f5c4.html`
- Food & Drink | Latest Food, Drink, Restaurant, and Recipes News | Fox News**  
<http://www.foxnews.com/food-drink.html>  
Food and Drink brings you the latest news on FOXNews.com. Topics include delicious recipes, advice from food experts, hot restaurants, party tips, and menus.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/3ce660e0d7455bcd4a087cd8149ec44d.html`
- MEDICAL RESEARCH | Fox News**  
<http://www.foxnews.com/category/health/medical-research.html>  
NA  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/d1708d283f54c74432a6c0ceb63d4fac.html`
- AIR AND SPACE | Fox News**  
<http://www.foxnews.com/category/science/air-and-space.html>  
NA  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/c1e6eaf14928094a4951aeb1a32ed6a3.html`
- Fox & Friends | Fox News**  
<http://www.foxnews.com/on-air/fox-and-friends>  
Fox & Friends on Fox News Channel daily from 6AM to 9AM ET. Ainsley Earhardt, Steve Doocy & Brian Kilmeade report on famous faces, health, politics & news you can use.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/925ba7ff1e9c3846181144c4090c1893.html`
- Lifestyle Slideshow | Fox News**  
<http://www.foxnews.com/lifestyle/slideshow.html>  
NA  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/da20fa522c28cc09f452f36efffaa54.html`
- Duchess of Cambridge stuns in emerald St. Patrick's Day look | Fox News**  
<http://www.foxnews.com/lifestyle/2018/03/17/duchess-cambridge-stuns-in-emerald-st-patrick-s-day-look.html>  
It was a festive top o' the morning for the radiant royal.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/ca5270b6552fc42ef321f052cf6891a5.html`
- Fox & Friends | Fox News**  
<http://www.foxnews.com/on-air/fox-and-friends>  
Fox & Friends on Fox News Channel daily from 6AM to 9AM ET. Ainsley Earhardt, Steve Doocy & Brian Kilmeade report on famous faces, health, politics & news you can use.  
`/Users/zejunliu/Desktop/solr-7.3.0/crawl_data/4a2a3bb2e58296f68066024a91717c58.html`

## (7) Austin Bombings Query

### Lucene Algorithm- Austin Bombings

The screenshot shows a search interface with the URL [localhost/~zejunliu/?q=Austin+Bombings&rankAlgorithm=lucene](http://localhost/~zejunliu/?q=Austin+Bombings&rankAlgorithm=lucene). The search term 'Austin Bombings' is entered in the search bar. Below the search bar are two buttons: 'lucene' and 'networkx'. The results page displays 10 out of 380 total results, all from Fox News articles about the Austin package bomb victim.

**Austin package bomb victim remembered as boy who 'could have accomplished anything' | Fox News**  
http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html  
The youngest victim slain in the string of package bombings rocking Austin, Texas is being mourned as a promising student and community leader who could have accomplished anything -- all while cops desperately search for the mysterious porch bomber who targeted the teen seemingly at random.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/da30dc668e2bc97107fa9179061ccb7a.html

**Austin package bomb victim remembered as boy who 'could have accomplished anything' | Fox News**  
http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html  
The youngest victim slain in the string of package bombings rocking Austin, Texas is being mourned as a promising student and community leader who could have accomplished anything -- all while cops desperately search for the mysterious porch bomber who targeted the teen seemingly at random.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/e10afda9985d27aa20548c12ccc36d4.html

**Austin package bomb victim remembered as boy who 'could have accomplished anything' | Fox News**  
http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html  
The youngest victim slain in the string of package bombings rocking Austin, Texas is being mourned as a promising student and community leader who could have accomplished anything -- all while cops desperately search for the mysterious porch bomber who targeted the teen seemingly at random.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/d9a8946293a7824dfd2c7ee490aa7c96.html

**Austin package bombs probably 'pretty simple,' components could lead cops to suspect, experts say | Fox News**  
http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html  
The devices used in a string of deadly package bombings rocking Austin, Texas are likely simple contraptions, the components of which will be key in tracking down the mysterious person behind the porch bombs, experts say.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/2f56b05809aee99462f51aabfbcc63f0.html

**Austin package bombs probably 'pretty simple,' components could lead cops to suspect, experts say | Fox News**  
http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html  
The devices used in a string of deadly package bombings rocking Austin, Texas are likely simple contraptions, the components of which will be key in tracking down the mysterious person behind the porch bombs, experts say.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/099fffc5c118e82151a16020c3a8e7f7.html

**Austin package bombs probably 'pretty simple,' components could lead cops to suspect, experts say | Fox News**  
http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html  
The devices used in a string of deadly package bombings rocking Austin, Texas are likely simple contraptions, the components of which will be key in tracking down the mysterious person behind the porch bombs, experts say.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/b68aca2ee69e3431cd9b746f406bc9bb2.html

**Austin package bomb victim remembered as boy who 'could have accomplished anything' | Fox News**  
http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html  
The youngest victim slain in the string of package bombings rocking Austin, Texas is being mourned as a promising student and community leader who could have accomplished anything -- all while cops desperately search for the mysterious porch bomber who targeted the teen seemingly at random.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/bf4e96fc1bfaadaa3d2eba0bab0ed5b.html

**Austin package bomb victim remembered as boy who 'could have accomplished anything' | Fox News**  
http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html  
The youngest victim slain in the string of package bombings rocking Austin, Texas is being mourned as a promising student and community leader who could have accomplished anything -- all while cops desperately search for the mysterious porch bomber who targeted the teen seemingly at random.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/4f7d624dc50280842567c296e951b8b2.html

**Austin package bombs probably 'pretty simple,' components could lead cops to suspect, experts say | Fox News**  
http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html  
The devices used in a string of deadly package bombings rocking Austin, Texas are likely simple contraptions, the components of which will be key in tracking down the mysterious person behind the porch bombs, experts say.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/5b6acecac98e8015dec52d9bf7ebc33.html

**Austin package bombs probably 'pretty simple,' components could lead cops to suspect, experts say | Fox News**  
http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html  
The devices used in a string of deadly package bombings rocking Austin, Texas are likely simple contraptions, the components of which will be key in tracking down the mysterious person behind the porch bombs, experts say.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/f57894eadfbe8cd4c28fe2445f758f92.html

## Networkx Algorithm- Austin Bombings

The screenshot shows a search interface with a URL bar containing "localhost/~zejunliu/?q=Austin+Bombings&rankAlgorithm=networkx". Below the URL bar is a search bar with the text "Austin Bombings" and a "Search" button. To the right of the search bar are two buttons: "lucene" and "networkx".

Search

Austin Bombings

lucene

networkx

Results 1 - 10 of 380:

### Technology | Internet, Mobile, and Social Media News | Fox News

<http://www.foxnews.com/tech.html>

News for Hardware, software, networking, and Internet media. Reporting on information technology, technology and business news.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/40426b57ce4acf76b2fbf4562f389b42.html

### Innovation | Fox News

<http://www.foxnews.com/category/tech/topics/innovation.html>

Innovation news articles and videos from FoxNews.com's Tech section.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/35c01374fb1040bad837c05ac6b9d57.html

### CANCER | Fox News

<http://www.foxnews.com/category/health/cancer.html>

NA

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/7db233f886c26e407f65bb63a08e9d49.html

### Terror | Fox News

<http://www.foxnews.com/category/us/terror.html>

US Terror news articles and videos from FoxNews.com's US section.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/55bfff84549d119df8f85b8e13ffb37ab.html

### Winds from North Korea nuclear test site may send radiation toward Japan, AccuWeather says | Fox News

<http://www.foxnews.com/weather/2017/11/01/winds-from-north-korea-nuclear-test-site-may-send-radiation-toward-japan/>

Following a deadly tunnel collapse at a North Korean nuclear test site, winds may strengthen from the northwest and direct radiation toward northern Japan, according to AccuWeather research.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/7f05bb2c59e274fd220fe39603b78584.html

### SXSW | Fox News

<http://www.foxnews.com/category/tech/topics/sxsw.html>

SXSW South by Southwest news articles and videos from FoxNews.com's Tech section.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/62ce77723cf70067f89162e27e53cd81.html

### Reports: Damaging winds, flooding leads to dangerous conditions | Fox News

<http://www.foxnews.com/weather/2017/10/29/reports-damaging-winds-flooding-leads-to-dangerous-conditions/>

A powerful storm will pummel the northeastern United States with heavy rain, locally damaging winds and significant travel disruptions into Monday.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/4316f6cb007b755cf0e3d9922e79639b.html

### Homicide | Fox News

<http://www.foxnews.com/category/us/crime/homicide.html>

Homicide news articles and videos from foxnews.com's US section

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/c8eacf1cac157943eb838eed1beb6a72.html

### Adrian Lamo, hacker who turned in Chelsea Manning to FBI, found dead | Fox News

<http://www.foxnews.com/us/2018/03/17/adrian-lamo-hacker-who-turned-in-chelsea-manning-to-fbi-found-dead.html>

Authorities in Kansas have confirmed the death of Adrian Lamo, the computer hacker who turned in Chelsea Manning to law enforcement for giving thousands of documents to WikiLeaks.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/0125e41ae09e6f6ae21c3ca4a291aff.html

### Addiction | Fox News

<http://www.foxnews.com/category/health/mental-health/addiction.html>

Addiction news articles and videos from FoxNews.com's Health section.

/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/4705242f182e6c04554839faf6337ca3.html

## (8) Paris Climate Deal Query

### Lucene Algorithm- Paris Climate Deal

A screenshot of a web browser window. The address bar shows the URL: localhost/~zejunliu/?q=Paris+Climate+Deal&rankAlgorithm=lucene. Below the address bar is a search bar containing the text "Paris Climate Deal". To the right of the search bar are two buttons: "lucene" and "networkx".

Results 1 - 10 of 3379:

#### [Post-Trump, UN climate pact supporters switch to a state and local strategy | Fox News](http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html)

http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html  
Backers of the United Nations-sponsored Paris climate agreement are switching strategies after the Trump administration's withdrawal from the deal, by dramatically stirring up grassroots forces.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/a5aed0fe3393f776ee35059ac690b436.html

#### [EU official says US won't reject Paris climate treaty, but White House denies statement | Fox News](http://www.foxnews.com/us/2017/09/16/eu-officials-says-us-wont-reject-paris-climate-treaty-but-white-house-denies-statement.html)

http://www.foxnews.com/us/2017/09/16/eu-officials-says-us-wont-reject-paris-climate-treaty-but-white-house-denies-statement.html  
The U.S. will not withdraw from the Paris climate deal, contrary to the public statements of President Trump in June, the Wall Street Journal said Saturday.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/3cdb0550f72f137b2f0aa9b4d95d690a.html

#### [Post-Trump, UN climate pact supporters switch to a state and local strategy | Fox News](http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html)

http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html  
Backers of the United Nations-sponsored Paris climate agreement are switching strategies after the Trump administration's withdrawal from the deal, by dramatically stirring up grassroots forces.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/eed89a80da2a7b377e17c35bd416175b.html

#### [Post-Trump, UN climate pact supporters switch to a state and local strategy | Fox News](http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html)

http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html  
Backers of the United Nations-sponsored Paris climate agreement are switching strategies after the Trump administration's withdrawal from the deal, by dramatically stirring up grassroots forces.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/a6a8020f9ca9c9aa0cde16be8eb7e9a3.html

#### [Post-Trump, UN climate pact supporters switch to a state and local strategy | Fox News](http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html)

http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html  
Backers of the United Nations-sponsored Paris climate agreement are switching strategies after the Trump administration's withdrawal from the deal, by dramatically stirring up grassroots forces.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/cca547df683621171ddb132f8471703c.html

#### [Here's how Trump could make a quick \(and complete\) exit from the Paris climate agreement right now | Fox News](http://www.foxnews.com/opinion/2017/12/12/heres-how-trump-could-make-quick-and-complete-exit-from-paris-climate-agreement-right-now.html)

http://www.foxnews.com/opinion/2017/12/12/heres-how-trump-could-make-quick-and-complete-exit-from-paris-climate-agreement-right-now.html  
December 12 is the second anniversary of the adoption of the Paris Climate Agreement, making this a fitting occasion to restate the obvious: remaining in the treaty endangers the U.S. economy, the Constitution's treaty process, and the nation's political independence.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/7a3f504949eee97c57fab965ca9ca6b3.html

#### [G-20 summit: Trump blocked out on Paris climate accord as 19 members reaffirm | Fox News](http://www.foxnews.com/world/2017/07/08/g-20-summit-us-rejects-paris-climate-accord-as-19-members-reaffirm.html)

http://www.foxnews.com/world/2017/07/08/g-20-summit-us-rejects-paris-climate-accord-as-19-members-reaffirm.html  
World leaders struggled Saturday to find common ground in the fight against climate change in the wake of President Trump's decision to leave the Paris agreement.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/fce3cfb9b268fc9fd7cff837991b1abb.html

#### [Cal Thomas: The secular progressives reveal \(again\) why they are not fit to lead anything | Fox News](http://www.foxnews.com/opinion/2017/06/06/cal-thomas-secular-progressives-reveal-again-why-are-not-fit-to-lead-anything.html)

http://www.foxnews.com/opinion/2017/06/06/cal-thomas-secular-progressives-reveal-again-why-are-not-fit-to-lead-anything.html  
For sheer hilarity and hyperbole it's hard to beat a recent headline on a Washington Post editorial opposing President Trump's decision to remove the U.S. from the nonbinding and unenforceable Paris climate agreement.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/e06c37d8a60058dc5d89466866f9854.html

#### [Climate Change | Fox News](http://www.foxnews.com/category/us/environment/climate-change.html)

http://www.foxnews.com/category/us/environment/climate-change.html  
Climate Change news articles and videos from foxnews.com's US section  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/d7486a5a183293bd21e4fea6890caacd.html

#### [Climate Change | Fox News](http://www.foxnews.com/category/world/environment/climate-change.html)

http://www.foxnews.com/category/world/environment/climate-change.html  
NA  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/38eb1938c44df9fd153810035975421b.html

## Networkx Algorithm- Paris Climate Deal

The screenshot shows a search interface with a URL bar containing "localhost/~zejunliu/?q=Paris+Climate+Deal&rankAlgorithm=networkx". Below the URL bar is a search input field with the text "Paris Climate Deal". To the right of the search input are two buttons: "lucene" and "networkx".

Search

Paris Climate Deal

lucene

networkx

Results 1 - 10 of 3379:

### World | Fox News

<http://www.foxnews.com/world.html>

Latest world news, international news, world video, international video on Fox News.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/d0ba9c4c1010d13413f1c4beee913e99.html

### Technology | Internet, Mobile, and Social Media News | Fox News

<http://www.foxnews.com/tech.html>

News for Hardware, software, networking, and Internet media. Reporting on information technology, technology and business news.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/40426b57ce4acf76b2fbf4562f389b42.html

### US | Fox News

<http://www.foxnews.com/us.html>

Fox news features local news and national news articles and videos.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/5d415a9250115d697d6d8fa61c9c92c8.html

### Science | Latest News and Videos on Astronomy, the Environment and Wildlife | Fox News

<http://www.foxnews.com/science.html>

Biology, astronomy, chemistry, physics on FoxNews.com. In-depth natural science news. Headlines from the worlds of biology, astronomy, chemistry and physics.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/8f8cbe94a804d7bee5df5b6cb0701702.html

### Lifestyle | Fox News

<http://www.foxnews.com/lifestyle.html>

Lifestyle, Auto, Food & Drink, and Home & Garden online news and information  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/ac6c6c21a9071c0b0cf38345b331f5c4.html

### Entertainment | Latest News, Videos & Photos on Celebrities, Movies & Music | Fox News

<http://www.foxnews.com/entertainment.html>

Celebrity gossip and entertainment news from FOXNews.com. Celebrity gossip, fashion, travel, lifestyle and arts and entertainment news headlines plus in-depth features and video clips.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/74203677b3a93832f91003adc6ad131c.html

### Food & Drink | Latest Food, Drink, Restaurant, and Recipes News | Fox News

<http://www.foxnews.com/food-drink.html>

Food and Drink brings you the latest news on FOXNews.com. Topics include delicious recipes, advice from food experts, hot restaurants, party tips, and menus.  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/3ce660e0d7455bcd4a087cd8149ec44d.html

### Cars + Trucks | Fox News

<http://www.foxnews.com/auto.html>

Automotive news, automotive industry, cars, trucks, SUVs  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/39203edf6f73dff637428cbeb173fe0d.html

### HEART HEALTH | Fox News

<http://www.foxnews.com/category/health/heart-health.html>

NA  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/a17e17f6d784a3fab6407a37f39eb5ef.html

### Military | Fox News

<http://www.foxnews.com/category/us/military.html>

Military news articles and videos from foxnews.com's US section  
/Users/zejunliu/Desktop/solr-7.3.0/crawl\_data/6950dcf1507d3463a22391ea78852cd9.html

### 3. Explanation regarding why some pages have higher PageRank values than others.

PageRank works by counting the number and quality of links to a page. The underlying assumption is that the more important websites, the more likely they are to receive links from other websites. So each page contain a different number of external links that point to it, so the more important a page is , it has more links pointing to it, thus it has higher PageRank values. And Lucene uses Vector Space Model and Boolean model to determine how relevant a given document is to a user's query, and the other method uses a field that refers to an external file that stores the pagerank scores, the different ranking algorithms determine different PageRank scores. So some pages have higher PageRank values than others.

### 4. A table containing list of URLs of the top ten results produced by both ranking methods for each query.

#### (1) Bitcoin Blockchain

Query	Lucene	NetworkX	overlap
Bitcoin Blockchain Top 10 URLs	<a href="http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html">http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html</a>	<a href="http://www.foxnews.com/">http://www.foxnews.com/</a>	0
	<a href="http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html">http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html</a>	<a href="http://www.foxnews.com/category/tech/topics/computers.html">http://www.foxnews.com/category/tech/topics/computers.html</a>	
	<a href="http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html">http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html</a>	<a href="http://www.foxnews.com/">http://www.foxnews.com/</a>	
	<a href="http://www.foxnews.com/politics/2018/02/07/arizona-might-allow-people-to-pay-taxes-via-bitcoin.html">http://www.foxnews.com/politics/2018/02/07/arizona-might-allow-people-to-pay-taxes-via-bitcoin.html</a>	<a href="http://www.foxnews.com/tech/2018/03/15/canadian-ceo-arrested-in-us-on-charges-supplying-encrypted-phones-to-mexican-cartels.html">http://www.foxnews.com/tech/2018/03/15/canadian-ceo-arrested-in-us-on-charges-supplying-encrypted-phones-to-mexican-cartels.html</a>	
	<a href="http://www.foxnews.com/tech/2018/01/24/hackers-steal-as-much-as-10-percent-new-cryptocurrency-funds.html">http://www.foxnews.com/tech/2018/01/24/hackers-steal-as-much-as-10-percent-new-cryptocurrency-funds.html</a>	<a href="http://www.foxnews.com/tech/2018/03/02/equifax-breach-worsens-sparking-more-concerns-about-consumers-data.html">http://www.foxnews.com/tech/2018/03/02/equifax-breach-worsens-sparking-more-concerns-about-consumers-data.html</a>	
	<a href="http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html">http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html</a>	<a href="http://www.foxnews.com/tech/2018/03/02/biggest-ddos-attack-on-record-hits-github.html">http://www.foxnews.com/tech/2018/03/02/biggest-ddos-attack-on-record-hits-github.html</a>	
	<a href="http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html">http://www.foxnews.com/tech/2018/03/01/lawsuit-alleges-bitcoin-pioneer-became-thief.html</a>	<a href="http://www.foxnews.com/tech/2018/02/22/hackers-hijack-tesla-system-in-bold-cryptocurrency-attack.html">http://www.foxnews.com/tech/2018/02/22/hackers-hijack-tesla-system-in-bold-cryptocurrency-attack.html</a>	
	<a href="http://www.foxnews.com/tech/2018/01/24/hackers-steal-as-much-as-10-percent-new-cryptocurrency-funds.html">http://www.foxnews.com/tech/2018/01/24/hackers-steal-as-much-as-10-percent-new-cryptocurrency-funds.html</a>	<a href="http://www.foxnews.com/tech/2018/02/04/tech-q-dueling-assistants-outsmarting-hackers-blocking-texts-and-more.html">http://www.foxnews.com/tech/2018/02/04/tech-q-dueling-assistants-outsmarting-hackers-blocking-texts-and-more.html</a>	
	<a href="http://www.foxnews.com/tech/2018/03/03/smartwatches-better-tv-reception-bitcoin-investments-and-more-tech-q.html">http://www.foxnews.com/tech/2018/03/03/smartwatches-better-tv-reception-bitcoin-investments-and-more-tech-q.html</a>	<a href="http://www.foxnews.com/tech/2018/03/14/are-your-office-computers-mining-cryptocurrency.html">http://www.foxnews.com/tech/2018/03/14/are-your-office-computers-mining-cryptocurrency.html</a>	
	<a href="http://www.foxnews.com/tech/2018/03/03/smartwatches-better-tv-reception-bitcoin-investments-and-more-tech-q.html">http://www.foxnews.com/tech/2018/03/03/smartwatches-better-tv-reception-bitcoin-investments-and-more-tech-q.html</a>	<a href="http://www.foxnews.com/tech/2017/12/06/scary-ransomware-attacks-famous-north-carolina-county.html">http://www.foxnews.com/tech/2017/12/06/scary-ransomware-attacks-famous-north-carolina-county.html</a>	

#### (2) Stephen Hawking

Query	Lucene	NetworkX	overlap
Stephen Hawking Top 10 URLs	<a href="http://www.foxnews.com/science/slideshow/2018/03/14/look-back-on-life-renowned-physicist-stephen-hawking.html">http://www.foxnews.com/science/slideshow/2018/03/14/look-back-on-life-renowned-physicist-stephen-hawking.html</a>	<a href="http://www.foxnews.com/science.html">http://www.foxnews.com/science.html</a>	0
	<a href="http://www.foxnews.com/science/slideshow/2018/03/14/look-back-on-life-renowned-physicist-stephen-hawking.html">http://www.foxnews.com/science/slideshow/2018/03/14/look-back-on-life-renowned-physicist-stephen-hawking.html</a>	<a href="http://www.foxnews.com/opinion.html">http://www.foxnews.com/opinion.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/16/how-stephen-hawking-transformed-our-understanding-black-holes.html">http://www.foxnews.com/science/2018/03/16/how-stephen-hawking-transformed-our-understanding-black-holes.html</a>	<a href="http://www.foxnews.com/entertainment.html">http://www.foxnews.com/entertainment.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/16/how-stephen-hawking-transformed-our-understanding-black-holes.html">http://www.foxnews.com/science/2018/03/16/how-stephen-hawking-transformed-our-understanding-black-holes.html</a>	<a href="http://www.foxnews.com/category/tech/topics/security.html">http://www.foxnews.com/category/tech/topics/security.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/14/stephen-hawking-unlocked-universe-possibilities-nasa-says.html">http://www.foxnews.com/science/2018/03/14/stephen-hawking-unlocked-universe-possibilities-nasa-says.html</a>	<a href="http://www.foxnews.com/category/world/global-economy.html">http://www.foxnews.com/category/world/global-economy.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/14/stephen-hawking-unlocked-universe-possibilities-nasa-says.html">http://www.foxnews.com/science/2018/03/14/stephen-hawking-unlocked-universe-possibilities-nasa-says.html</a>	<a href="http://www.foxnews.com/category/us/personal-freedoms.html">http://www.foxnews.com/category/us/personal-freedoms.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/14/stephen-hawking-famed-physicist-dead-at-76.html">http://www.foxnews.com/science/2018/03/14/stephen-hawking-famed-physicist-dead-at-76.html</a>	<a href="http://www.foxnews.com/category/science/natural-science.html">http://www.foxnews.com/category/science/natural-science.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/14/stephen-hawking-famed-physicist-dead-at-76.html">http://www.foxnews.com/science/2018/03/14/stephen-hawking-famed-physicist-dead-at-76.html</a>	<a href="http://www.foxnews.com/category/science/air-and-space.html">http://www.foxnews.com/category/science/air-and-space.html</a>	
	<a href="http://www.foxnews.com/tech/2018/03/14/stephen-hawking-tech-execs-remember-legacy-famed-physicist.html">http://www.foxnews.com/tech/2018/03/14/stephen-hawking-tech-execs-remember-legacy-famed-physicist.html</a>	<a href="http://www.foxnews.com/tech/slideshow.html">http://www.foxnews.com/tech/slideshow.html</a>	
	<a href="http://www.foxnews.com/tech/2018/03/14/stephen-hawking-tech-execs-remember-legacy-famed-physicist.html">http://www.foxnews.com/tech/2018/03/14/stephen-hawking-tech-execs-remember-legacy-famed-physicist.html</a>	<a href="http://www.foxnews.com/science/slideshow.html">http://www.foxnews.com/science/slideshow.html</a>	

#### (3) Falcon Heavy

Query	Lucene	NetworkX	overlap
Falcon Heavy Top 10 URLs	<a href="http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html">http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html</a>	<a href="http://www.foxnews.com/category/tech/topics/security.html">http://www.foxnews.com/category/tech/topics/security.html</a>	0
	<a href="http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html">http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html</a>	<a href="http://www.foxnews.com/category/politics/elections.html">http://www.foxnews.com/category/politics/elections.html</a>	
	<a href="http://www.foxnews.com/science/2018/02/12/06/spacex-falcon-heavy-rocket-launches-successfully.html">http://www.foxnews.com/science/2018/02/12/06/spacex-falcon-heavy-rocket-launches-successfully.html</a>	<a href="http://www.foxnews.com/category/health/mental-health.html">http://www.foxnews.com/category/health/mental-health.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html">http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html</a>	<a href="http://www.foxnews.com/category/world/disasters.html">http://www.foxnews.com/category/world/disasters.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html">http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html</a>	<a href="http://www.foxnews.com/weather/your-weather/index.html">http://www.foxnews.com/weather/your-weather/index.html</a>	
	<a href="http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html">http://www.foxnews.com/science/2018/03/12/how-spacex-falcon-heavy-rocket-compares-to-elon-musks-other-powerful-spacecraft.html</a>	<a href="http://www.foxnews.com/weather/index.html">http://www.foxnews.com/weather/index.html</a>	
	<a href="http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html">http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html</a>	<a href="http://www.foxnews.com/weather/slideshows/index.html">http://www.foxnews.com/weather/slideshows/index.html</a>	
	<a href="http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html">http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html</a>	<a href="http://www.foxnews.com/slideshows/index.html">http://www.foxnews.com/slideshows/index.html</a>	
	<a href="http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html">http://www.foxnews.com/science/2018/02/06/spacex-falcon-heavy-rocket-launches-successfully.html</a>	<a href="http://www.foxnews.com/weather/your-weather/index.html">http://www.foxnews.com/weather/your-weather/index.html</a>	
	<a href="http://www.foxnews.com/science/2018/02/07/elon-musk-has-launched-falcon-heavy-but-how-long-does-it-take-to-get-to-mars.html">http://www.foxnews.com/science/2018/02/07/elon-musk-has-launched-falcon-heavy-but-how-long-does-it-take-to-get-to-mars.html</a>	<a href="http://www.foxnews.com/world/slideshow.html">http://www.foxnews.com/world/slideshow.html</a>	

## (4) Syrian War

Query	Lucene	NetworkX	overlap
Syrian War Top 10 URLs	<a href="http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html">http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html</a>	<a href="http://www.foxnews.com/world.html">http://www.foxnews.com/world.html</a>	0
	<a href="http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html">http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html</a>	<a href="http://www.foxnews.com/us.html">http://www.foxnews.com/us.html</a>	
	<a href="http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html">http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html</a>	<a href="http://www.foxnews.com/science.html">http://www.foxnews.com/science.html</a>	
	<a href="http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html">http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html</a>	<a href="http://www.foxnews.com/opinion.html">http://www.foxnews.com/opinion.html</a>	
	<a href="http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html">http://www.foxnews.com/world/2018/03/15/syria-marks-7-years-war-hundreds-leave-besieged-enclave.html</a>	<a href="http://www.foxnews.com/shows.html">http://www.foxnews.com/shows.html</a>	
	<a href="http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html">http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html</a>	<a href="http://www.foxnews.com/auto.html">http://www.foxnews.com/auto.html</a>	
	<a href="http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html">http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html</a>	<a href="http://www.foxnews.com/category/science/archaeology.html">http://www.foxnews.com/category/science/archaeology.html</a>	
	<a href="http://www.foxnews.com/politics/2017/03/10/new-trump-travel-ban-cant-be-enforced-on-syrian-family-trying-to-flee-to-wisconsin-judge-says.html">http://www.foxnews.com/politics/2017/03/10/new-trump-travel-ban-cant-be-enforced-on-syrian-family-trying-to-flee-to-wisconsin-judge-says.html</a>	<a href="http://www.foxnews.com/category/tech/topics/innovation.html">http://www.foxnews.com/category/tech/topics/innovation.html</a>	
	<a href="http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html">http://www.foxnews.com/opinion/2018/03/16/rep-adam-kinzinger-it-s-for-us-to-lead-on-syria-failure-to-act-is-failure-by-all-us.html</a>	<a href="http://www.foxnews.com/category/us/military.html">http://www.foxnews.com/category/us/military.html</a>	
	<a href="http://www.foxnews.com/world/2017/04/08/in-istanbul-little-syria-refugees-want-more-from-us.html">http://www.foxnews.com/world/2017/04/08/in-istanbul-little-syria-refugees-want-more-from-us.html</a>	<a href="http://www.foxnews.com/category/politics/elections.html">http://www.foxnews.com/category/politics/elections.html</a>	

## (5) LA Rams

Query	Lucene	NetworkX	overlap
LA Rams Top 10 URLs	<a href="http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html">http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html</a>	<a href="http://www.foxnews.com/tech.html">http://www.foxnews.com/tech.html</a>	0
	<a href="http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html">http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html</a>	<a href="http://www.foxnews.com/lifestyle.html">http://www.foxnews.com/lifestyle.html</a>	
	<a href="http://www.foxnews.com/sports/2017/01/25/jim-kelly-draws-on-experience-in-campaign-against-cancer.html">http://www.foxnews.com/sports/2017/01/25/jim-kelly-draws-on-experience-in-campaign-against-cancer.html</a>	<a href="http://www.foxnews.com/">http://www.foxnews.com/</a>	
	<a href="http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html">http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html</a>	<a href="http://www.foxnews.com/category/style-and-beauty.html">http://www.foxnews.com/category/style-and-beauty.html</a>	
	<a href="http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html">http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html</a>	<a href="http://www.foxnews.com/category/politics/elections.html">http://www.foxnews.com/category/politics/elections.html</a>	
	<a href="http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html">http://www.foxnews.com/sports/2018/01/24/rams-add-former-ucla-offensive-coordinator-jedd-fisch-to-staff.html</a>	<a href="http://www.foxnews.com/">http://www.foxnews.com/</a>	
	<a href="http://www.foxnews.com/auto/2018/01/23/tesla-allegedly-on-autopilot-rams-into-back-fire-truck.html">http://www.foxnews.com/auto/2018/01/23/tesla-allegedly-on-autopilot-rams-into-back-fire-truck.html</a>	<a href="http://www.foxnews.com/shows/cavuto-live.html">http://www.foxnews.com/shows/cavuto-live.html</a>	
	<a href="http://www.foxnews.com/us/2018/02/04/super-bowl-protesters-to-take-knee-in-minneapolis-with-rally-against-police-brutality.html">http://www.foxnews.com/us/2018/02/04/super-bowl-protesters-to-take-knee-in-minneapolis-with-rally-against-police-brutality.html</a>	<a href="http://www.foxnews.com/on-air/shepard-smith">http://www.foxnews.com/on-air/shepard-smith</a>	
	<a href="http://www.foxnews.com/us/2018/02/04/super-bowl-protesters-to-take-knee-in-minneapolis-with-rally-against-police-brutality.html">http://www.foxnews.com/us/2018/02/04/super-bowl-protesters-to-take-knee-in-minneapolis-with-rally-against-police-brutality.html</a>	<a href="http://www.foxnews.com/shows/fox-news-specials.html">http://www.foxnews.com/shows/fox-news-specials.html</a>	
	<a href="http://www.foxnews.com/us/2018/01/29/off-duty-cop-shoots-driver-attempting-to-run-over-pedestrians-philadelphi-police-say.html">http://www.foxnews.com/us/2018/01/29/off-duty-cop-shoots-driver-attempting-to-run-over-pedestrians-philadelphi-police-say.html</a>	<a href="http://www.foxnews.com/on-air/fox-and-friends-first">http://www.foxnews.com/on-air/fox-and-friends-first</a>	

## (6) Black Panther

Query	Lucene	NetworkX	overlap
Black Panther Top 10 URLs	<a href="http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html">http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html</a>	<a href="http://www.foxnews.com/us.html">http://www.foxnews.com/us.html</a>	0
	<a href="http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html">http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html</a>	<a href="http://www.foxnews.com/science.html">http://www.foxnews.com/science.html</a>	
	<a href="http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html">http://www.foxnews.com/entertainment/2018/02/02/stan-lee-95-feeling-great-after-return-from-la-hospital.html</a>	<a href="http://www.foxnews.com/lifestyle.html">http://www.foxnews.com/lifestyle.html</a>	
	<a href="http://www.foxnews.com/entertainment/2018/02/28/stan-lee-robbed-1-4m-report-says.html">http://www.foxnews.com/entertainment/2018/02/28/stan-lee-robbed-1-4m-report-says.html</a>	<a href="http://www.foxnews.com/food-drink.html">http://www.foxnews.com/food-drink.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html">http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html</a>	<a href="http://www.foxnews.com/category/health/medical-research.html">http://www.foxnews.com/category/health/medical-research.html</a>	
	<a href="http://www.foxnews.com/tech/2017/12/20/twitter-purge-far-right-accounts-sparks-backlash-praise-and-confusion.html">http://www.foxnews.com/tech/2017/12/20/twitter-purge-far-right-accounts-sparks-backlash-praise-and-confusion.html</a>	<a href="http://www.foxnews.com/category/science/air-and-space.html">http://www.foxnews.com/category/science/air-and-space.html</a>	
	<a href="http://www.foxnews.com/tech/2017/12/20/twitter-purge-far-right-accounts-sparks-backlash-praise-and-confusion.html">http://www.foxnews.com/tech/2017/12/20/twitter-purge-far-right-accounts-sparks-backlash-praise-and-confusion.html</a>	<a href="http://www.foxnews.com/on-air/fox-and-friends">http://www.foxnews.com/on-air/fox-and-friends</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html">http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html</a>	<a href="http://www.foxnews.com/lifestyle/slideshow.html">http://www.foxnews.com/lifestyle/slideshow.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html">http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html</a>	<a href="http://www.foxnews.com/lifestyle/2018/03/17/duchess-cambridge-stuns-in-emerald-st-patrick-s-day-look.html">http://www.foxnews.com/lifestyle/2018/03/17/duchess-cambridge-stuns-in-emerald-st-patrick-s-day-look.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html">http://www.foxnews.com/us/2018/03/15/fiu-bridge-collapse-sparks-reaction-from-politicians-lawmakers.html</a>	<a href="http://www.foxnews.com/on-air/fox-and-friends">http://www.foxnews.com/on-air/fox-and-friends</a>	

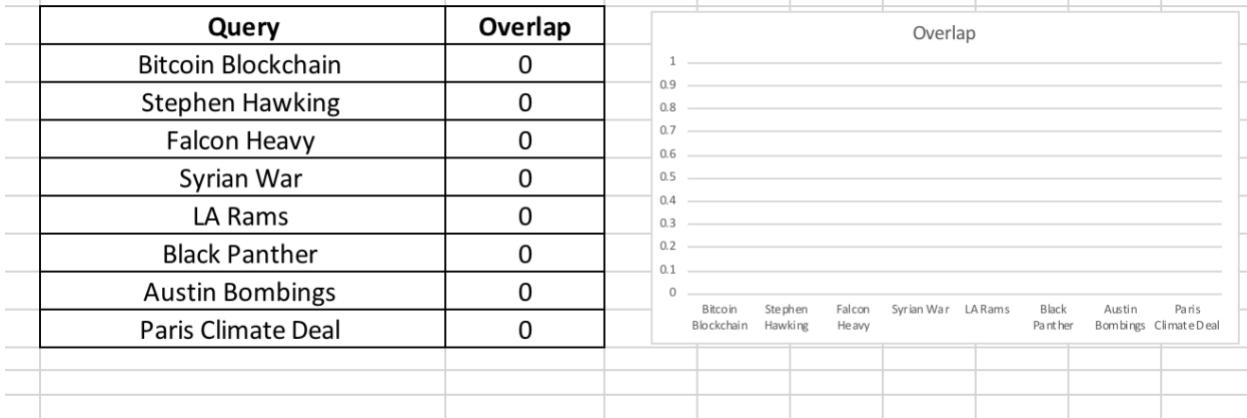
## (7) Austin Bombings

Query	Lucene	NetworkX	overlap
Austin Bombings Top 10 URLs	<a href="http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html">http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html</a>	<a href="http://www.foxnews.com/tech.html">http://www.foxnews.com/tech.html</a>	0
	<a href="http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html">http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html</a>	<a href="http://www.foxnews.com/category/tech/topics/innovation.html">http://www.foxnews.com/category/tech/topics/innovation.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html">http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html</a>	<a href="http://www.foxnews.com/category/health/cancer.html">http://www.foxnews.com/category/health/cancer.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html">http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html</a>	<a href="http://www.foxnews.com/category/us/terror.html">http://www.foxnews.com/category/us/terror.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html">http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html</a>	<a href="http://www.foxnews.com/weather/2017/11/01/winds-from-north-korea-nuclear-test-site-may-send-radiation-toward-japan/">http://www.foxnews.com/weather/2017/11/01/winds-from-north-korea-nuclear-test-site-may-send-radiation-toward-japan/</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html">http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html</a>	<a href="http://www.foxnews.com/category/tech/topics/sxsw.html">http://www.foxnews.com/category/tech/topics/sxsw.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html">http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html</a>	<a href="http://www.foxnews.com/weather/2017/10/29/reports-damaging-winds-flooding-leads-to-dangerous-conditions/">http://www.foxnews.com/weather/2017/10/29/reports-damaging-winds-flooding-leads-to-dangerous-conditions/</a>	
	<a href="http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html">http://www.foxnews.com/us/2018/03/14/austin-package-bomb-victim-remembered-as-boy-who-could-have-accomplished-anything.html</a>	<a href="http://www.foxnews.com/category/us/crime/homicide.html">http://www.foxnews.com/category/us/crime/homicide.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html">http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html</a>	<a href="http://www.foxnews.com/us/2018/03/17/adrian-lamo-hacker-who-turned-in-chelsea-manning-to-fbi-found-dead.html">http://www.foxnews.com/us/2018/03/17/adrian-lamo-hacker-who-turned-in-chelsea-manning-to-fbi-found-dead.html</a>	
	<a href="http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html">http://www.foxnews.com/us/2018/03/15/austin-package-bombs-probably-pretty-simple-components-could-lead-cops-to-suspect-experts-say.html</a>	<a href="http://www.foxnews.com/category/health/mental-health/addiction.html">http://www.foxnews.com/category/health/mental-health/addiction.html</a>	

## (8) Paris Climate Deal

Query	Lucene	NetworkX	overlap
Paris Climate Deal Top 10 URLs	<a href="http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html">http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html</a>	<a href="http://www.foxnews.com/world.html">http://www.foxnews.com/world.html</a>	0
	<a href="http://www.foxnews.com/us/2017/09/16/eu-officials-says-us-wont-reject-paris-climate-treaty-but-white-house-denies-statement.html">http://www.foxnews.com/us/2017/09/16/eu-officials-says-us-wont-reject-paris-climate-treaty-but-white-house-denies-statement.html</a>	<a href="http://www.foxnews.com/tech.html">http://www.foxnews.com/tech.html</a>	
	<a href="http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html">http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html</a>	<a href="http://www.foxnews.com/us.html">http://www.foxnews.com/us.html</a>	
	<a href="http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html">http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html</a>	<a href="http://www.foxnews.com/science.html">http://www.foxnews.com/science.html</a>	
	<a href="http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html">http://www.foxnews.com/politics/2017/12/06/post-trump-un-climate-pact-supporters-switch-to-state-and-local-strategy.html</a>	<a href="http://www.foxnews.com/lifestyle.html">http://www.foxnews.com/lifestyle.html</a>	
	<a href="http://www.foxnews.com/opinion/2017/12/12/heres-how-trump-could-make-quick-and-complete-exit-from-paris-climate-agreement-right-now.html">http://www.foxnews.com/opinion/2017/12/12/heres-how-trump-could-make-quick-and-complete-exit-from-paris-climate-agreement-right-now.html</a>	<a href="http://www.foxnews.com/entertainment.html">http://www.foxnews.com/entertainment.html</a>	
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	<a href="http://www.foxnews.com/opinion/2017/06/06/cal-thomas-secular-progressives-reveal-again-why-are-not-fit-to-lead-anything.html">http://www.foxnews.com/opinion/2017/06/06/cal-thomas-secular-progressives-reveal-again-why-are-not-fit-to-lead-anything.html</a>	<a href="http://www.foxnews.com/auto.html">http://www.foxnews.com/auto.html</a>	
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	<a href="http://www.foxnews.com/category/world/environment/climate-change.html">http://www.foxnews.com/category/world/environment/climate-change.html</a>	<a href="http://www.foxnews.com/category/us/military.html">http://www.foxnews.com/category/us/military.html</a>	

5. An overlap graph showing the amount of overlap between the two ranking strategies for all queries.



we can see that the amount of overlap between the top ten results using two ranking strategies for each query is zero. So there is no overlap at all.